

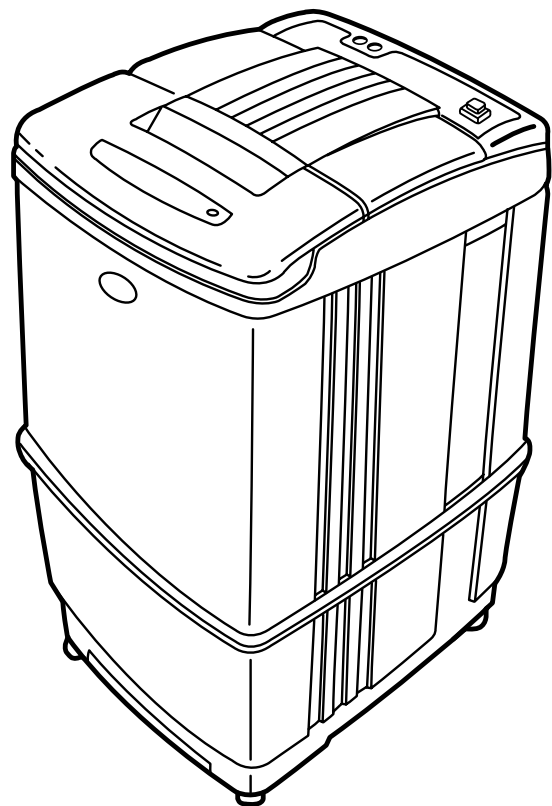
DAEWOO

Service Manual

Full-Auto Electric Washing Machine

DWF-7560/7590 series

DWF-8060/8090 series



DAEWOO ELECTRONICS CO., LTD.

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1. SPECIFICATIONS

NO	ITEM		SPECIFICATIONS
1	POWER SOURCE		Available in All Local AC Voltage and Frequency
2	POWER	DWF-7560/90	370W (50Hz), 460W (60Hz)
	CONSUMPTION	DWF-8060/90	400W (50Hz), 480W (60Hz)
3	MACHINE	DWF-7560/90	NON PUMP: NET; 48kg, GROSS; 52kg PUMP: NET; 49kg, GROSS; 53kg
	WEIGHT	DWF-8060/90	NON PUMP: NET; 49kg, GROSS; 53kg PUMP: NET; 50kg, GROSS; 54kg
4	DIMENSION (WXHXD)		650X1005X650 mm
5	WASHING COURSE		Full Automatic 6 Courses: DRY; FUZZY, DRY, SILK, SPEED, STRONG, BLANKET NON DRY; FUZZY, WOOL, SPEED, STRONG, BLANKET, NIGHT and MEMORY Course
6	WATER CONSUMPTION		259 ℓ (7.5kg), 265 ℓ (8.0kg)
7	WATER LEVEL	DWF-7570/90	HIGH (80 ℓ), MIDDLE (68 ℓ), LOW (55 ℓ), SMALL (42 ℓ), E.SMALL (32 ℓ)
	SELECTOR	DWF-8060/90	HIGH (82 ℓ), MIDDLE (70 ℓ), LOW (57ℓ), SMALL (43 ℓ), E.SMALL (32 ℓ)
8	OPERATING WATER PRESSURE		0.3~8kg/cm ² (2.9~78.4N/cm ²)
9	REVOLUTION PER MINUTE		SPIN: 680rpm, WASH: 130rpm (50Hz) WOOL WASH: 70rpm SPIN: 780rpm, WASH: 150rpm (60 Hz)
10	PULSATOR		6 WINGS (ø 376mm)
11	WATER LEVEL CONTROL		ELECTRONICAL SENSOR
12	OUTER CABINET		PLASTIC
13	ANTI-NOISE PLATE		O
14	GEAR MECHANISM ASSY		HELICAL GEAR FOR LOW NOISE
15	LINT FILTER		O
16	SOFTENER DISPENSOR		O
17	AUTO. LOAD SENSING		O
18	AUTO. POWER OFF		O
19	FUNCTION FOR SOAK WASH		O
20	ALARM SIGNAL		O
21	RESIDUAL TIME DISPLAY		O
22	AUTO. RE-FEED WATER		O
23	NEW WATER FLOW		WATER FLOW FOR ADJUSTING THE UNBALANCED LOAD
24	TRANSPARENT WINDOW		O
25	FUNCTION FOR BUBBLE		O
26	MAXIMUM MASS of TEXTILE	DWF-7560/90	7.5kg
		DWF-8060/90	8.0kg

2. FEATURE AND TECHNICAL EXPLANATION

CONTROL SYSTEM FOR AUTO COURSE

FUNCTION PRINCIPLE OF SENSING

- 1) Sensing the wave width of two ports of capacitor.
- 2) Choosing the 'A~D' course according to the wave width.
- 3) Setting up the most suitable time to wash, rinse and spin by the judgement.

SENSING TIME

Sense the wave width for 28 seconds from start of washing.

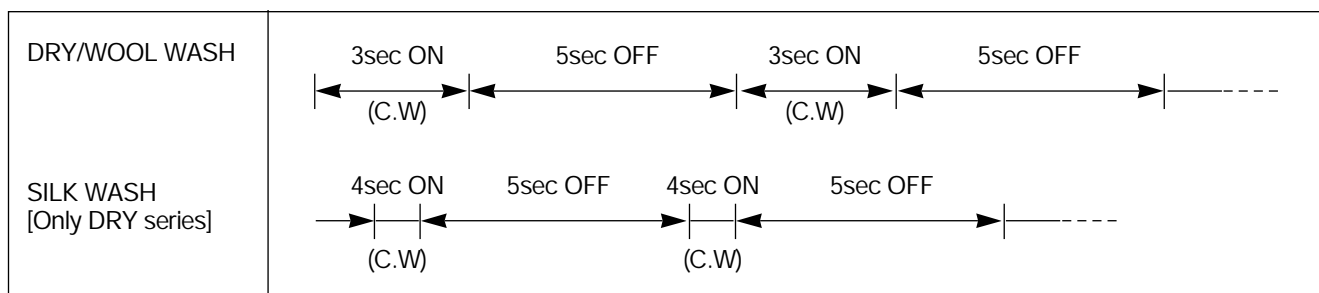
OPERATING PROCESS ACCORDING TO THE WASHING CAPACITY

COURSE	WASHING CAPACITY	WATER LEVEL	WASH TIME	TIMES OF RINSE	SPIN TIME
A	0~2.0 Kg	E.Low	6 min	2	3 min
B	1.0~3.0 Kg	Low	9 min	2	4 min
C	2.0~4.0 Kg	MIDDLE	12 min	2	5 min
D	Above 3.0 Kg	High	15 min	2	5 min

CONTROL SYSTEM FOR WOOL WASH

R.P.M of pulsator become half of normal wash by signal of P.C.B. Ass'y.

INPUT WAVE FORM OF MOTOR ON WOOL WASH



PROCESS OF WOOL WASH

When the DRY WOOL COURSE is selected, process shall be set up as below table automatically.

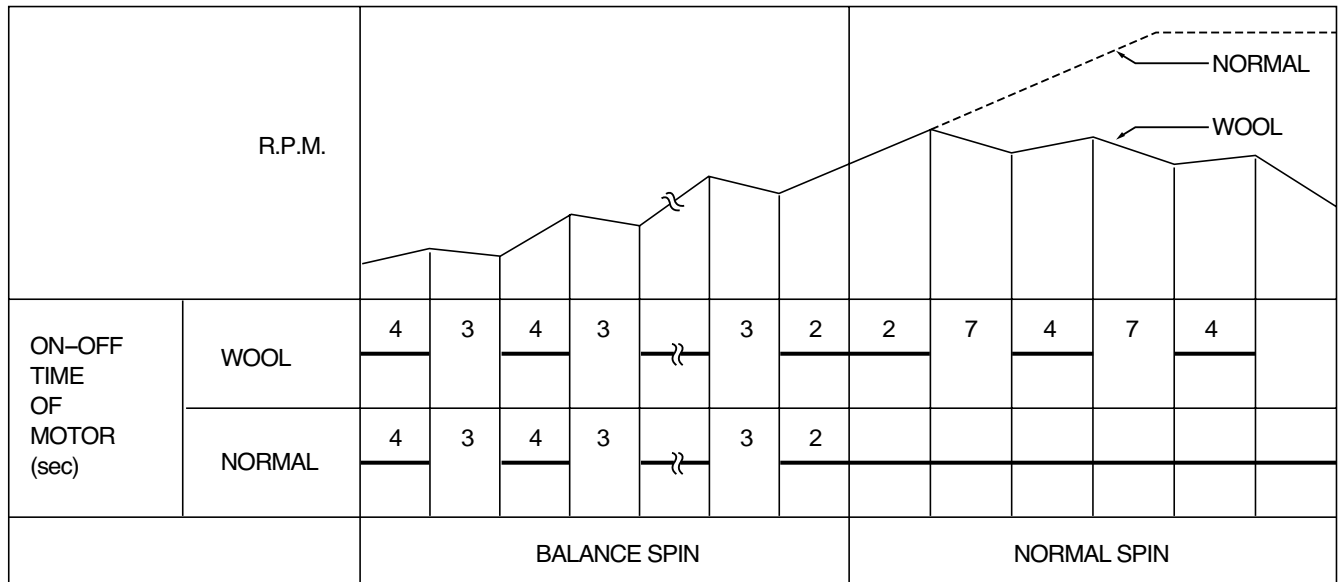
(LOAD TO BE WASHED)	WATER LEVEL	WASH TIME	TIMES OF RINSE	SPIN TIME	WASH TEMP.
(Below 2 Kg)	MIDDLE	6 min	2	30 sec	COLD

NOTE: You can't change the water temperature because the P.C.B. ASS'Y set up the 'COLD TEMP' automatically at the same time you select the 'WOOL COURSE'.

CONTROL SYSTEM FOR WOOL SPIN

It is a function to prevent the deformation of WOOL.

PROGRESS CHART ON WOOL SPIN



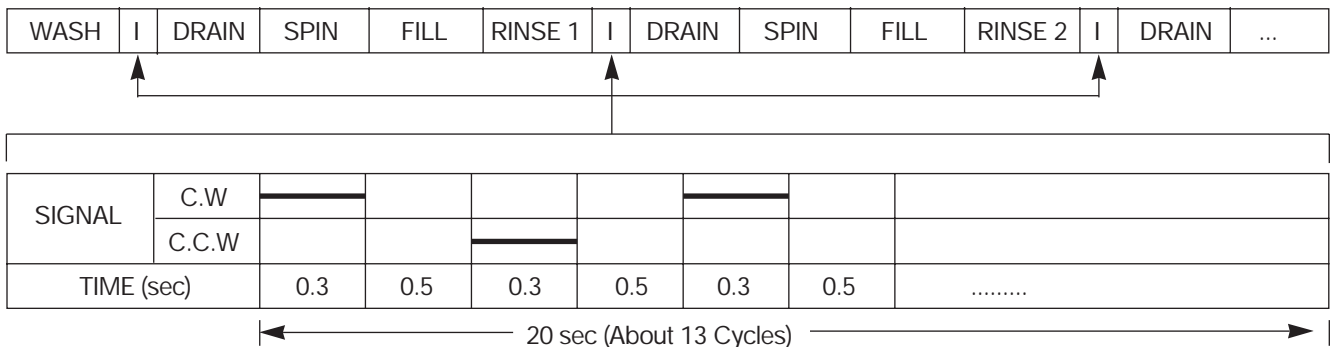
WATER FLOW TO ADJUST THE UNBALANCED LOAD

It is a function to prevent eccentricity of the clothes after wash by rotating pulsator C.W and C.C.W for 20 seconds.

EFFECT

Reduce vibration and noise effectively while spinning.

WATER FLOW

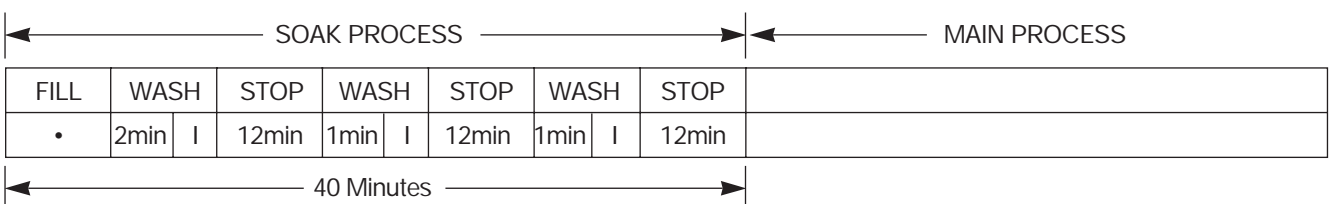


FUNCTION FOR SOAK WASH

DISPLAY THE REMAINING TIME

When the SOAK WASH is selected, the total wash time will increase by 40 minutes.

PROGRESS



NOTE: "I" Mark shows the water flow to adjust the unbalanced load.











AUTOMATIC WATER SUPPLY SYSTEM ON BLANKET WASH

The water level would be lowered because the blanket absorbs water at the beginning of washing. Therefore, after 30 seconds, the operation is interrupted to check the water level, and then the water is supplied again until it is reached at the selected level.

WATER FLOW ON STRONG WASH

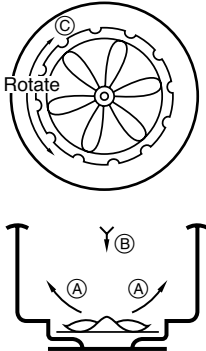
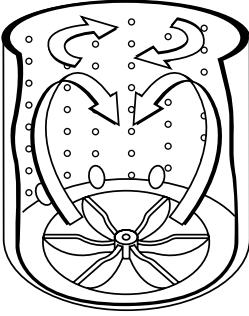
It washes cleanly the heavily stained clothes such as working-clothes, climbing-clothes and blue-jean by using this strong water currents as shown below.

WATER FLOW

SIGNAL OF MOTOR	C.C.W																				
	C.W																				
TIME (sec)		0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	3.2	0.8	3.2	0.8
		1 CYCLE																			

PULSATOR SYSTEM

When the new shaped pulsator is rotated C.W or C.C.W at a high speed, it makes the 'heart-shaped' water currents as shown below.



WATER FLOW

- A Water is pushed out by rotation of the pulsator.
- B Water is pulled down by rotation of the pulsator.
- C Water flow is generated by rotation of the pulsator.

AUTOMATIC DRAINING TIME ADJUSTMENT

This system set a drain time automatically depending on condition of draining.

Draining condition	Good draining	The washer begins spin process after drainage.
	Bad draining	Draining time is prolonged.
	No draining	Program is stopped and gives the alarm.

FUNCTIONAL PRINCIPLE

1. The micom can remember the time from the beginning of drain to reset point when the pressure switch reaches to "OFF" point.

Drain Time	Movement of the program
Less than 5 minutes	Continue draining.
More than 5 minutes	Program are stopped and give an alarm with twinkle the "UE" on display lamp.

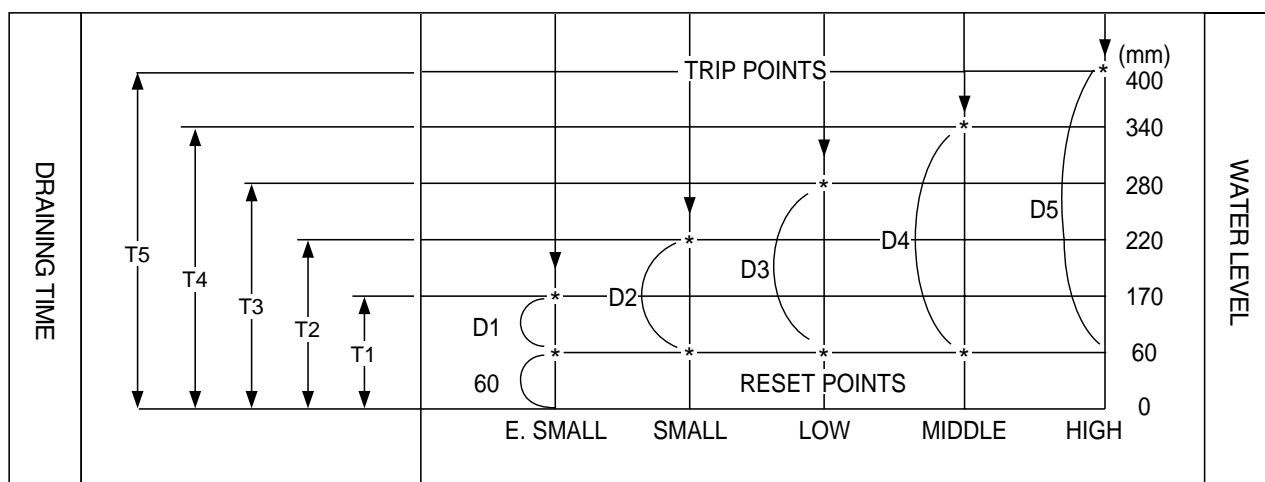
2. In case of continuous draining, residual drain time is determined by micom.

$$\text{Total drain time} = D + 60$$

(T sec)

Time of remaining drain process.

Count time of P.C.B. ASS'Y.



$$T1 = D1 + 60 \text{ (sec)} \quad T2 = D2 + 60 \text{ (sec)} \quad T3 = D3 + 60 \text{ (sec)}$$

$$T4 = D4 + 60 \text{ (sec)} \quad T5 = D5 + 60 \text{ (sec)}$$

SOFTENER DISPENSER

This is the device to dispense the softener automatically by centrifugal force.
This is installed inside the auto-balancer.

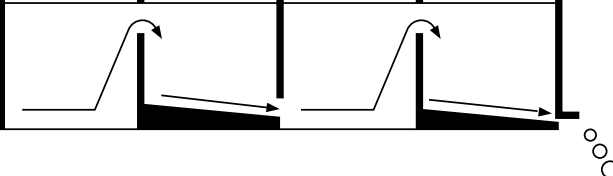
FUNCTIONAL PRINCIPLE

1. Softener stays in room (A) when pour the softener to softener inlet.
 2. Softener move (A) to (B) by centrifugal force during intermediate spin process.
 3. Softener flow (B) to (C) during rinse process next of intermediate spin.
 4. Softener move (C) to (D) by centrifugal force during second intermediate spin.
- And after finish spin process, softener drop between tub and outer tub ass'y from softener outlet.

FLOW OF THE SOFTENER

	Wash	intermediate Spin	Hold	intermediate Spin	Rinse	Spin
Normal Course	Centrifugal force (A) → (B)		Flow by weight (B) → (C)	Centrifugal force (C) → (D)	Flow by weight (D) →	

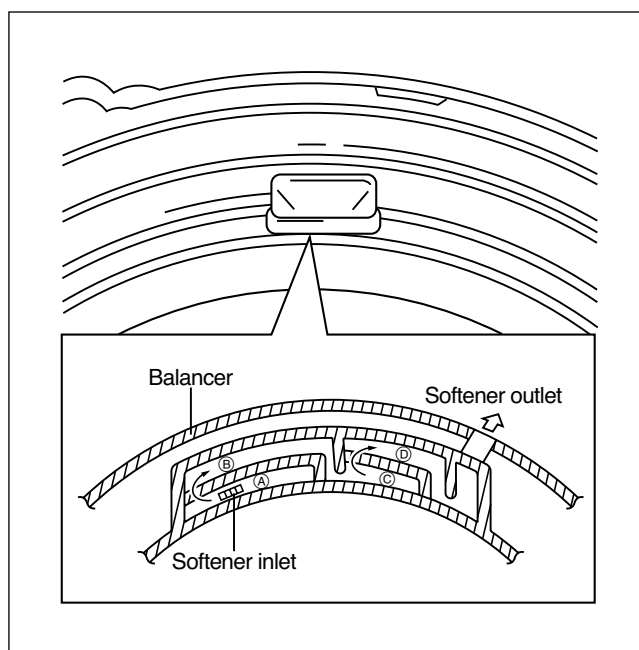
FLOW OF THE SOFTENER INSIDE OF THE BALANCE

Room inside the balancer	A	B	C	D
Flow by Centrifugal force				

NOTE: Softener moves into next room when r.p.m of the tub is more than 100 r.p.m.

HOW TO CHECK MOVEMENT

Pour a reasonable amount of "MILK" into softener dispenser and operate the washer with no load.
In final rinse cycle, make sure than the milk is added into the tub through softener outlet.

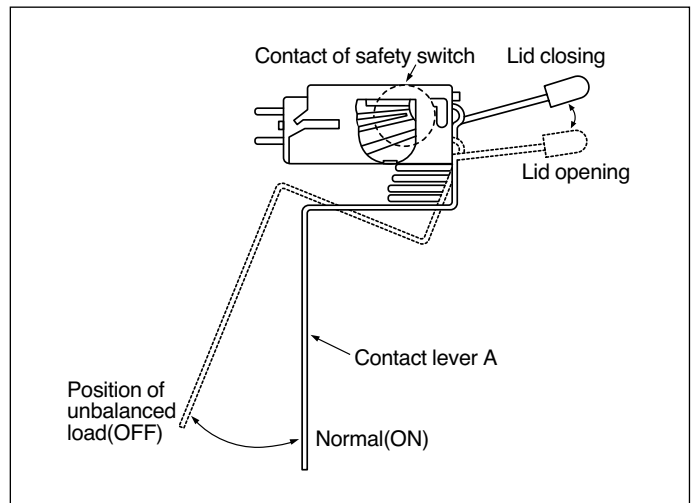


AUTOMATIC UNBALANCE ADJUSTMENT

This system is to prevent abnormal vibration during intermittent spin and spin process.

FUNCTIONAL PRINCIPLE

1. When the lid is closed, the safety switch contact is "ON" position.
2. In case that wash loads get uneven during spin, the outer tub hits the safety switch due to the serious vibration, and the spin process is interrupted.
3. In case that P.C.B. ASS'Y gets "OFF" signal from the safety switch, spin process are stopped and rinse process is started automatically by P.C.B. ASS'Y.
4. If the safety switch is operated due to the unbalance of the tub, the program is stopped and the alarm is given.



NOTE:

The alarm finish when you close the lid after opening it. Check the unbalance of the wash load and the installation condition.

CIRCULATING-WATER COURSE AND LINT FILTER

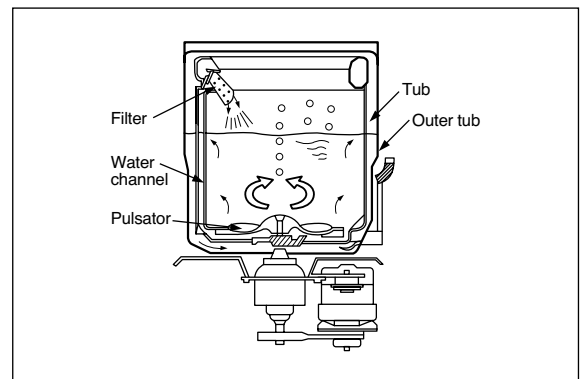
CIRCULATING-WATER

The washing and rinsing effects have been improved by adopting the water system in which water in the tub is circulated in a designed pattern.

When the pulsator rotates during the washing or rinsing process, the water below the pulsator vanes creates a water currents as shown in figure.

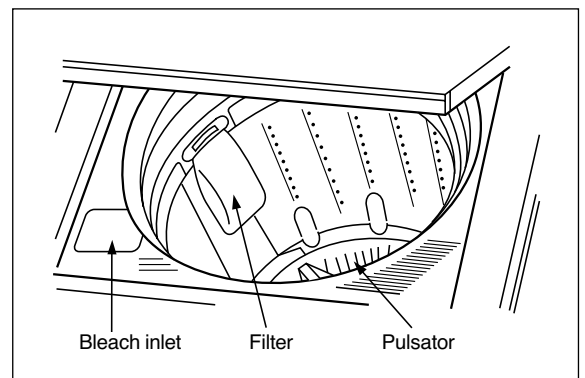
The water is then discharged from the upper part of the tub through the water channel.

About 40L/min. water is circulated at the 'high' water level, standard wash load and standard water currents.



LINT FILTER

Much lint may be obtained according to the kind of clothes to be washed and some of the lint may also sticks to the clothes. To minimize this possibility, a lint filter is provided on the upper part of the tub to filter the wash water as it is discharged from the water channel. It is good to use the lint filter during washing.



HOW TO CLEAN THE LINT FILTER

1. Pull the filter frame upward.
2. Turn the lint filter inside out, and wash the lint off with water.
3. Return the filter as it was, and fix the filter frame to the slot.

AUTOMATIC POWER OFF

P.C.B. ASS'Y sends a signal to the solenoid in the power switch 10 minutes later after complete washing. Then the solenoid pull the locking lever which had lock the push button. Therefore the power is turned off automatically.

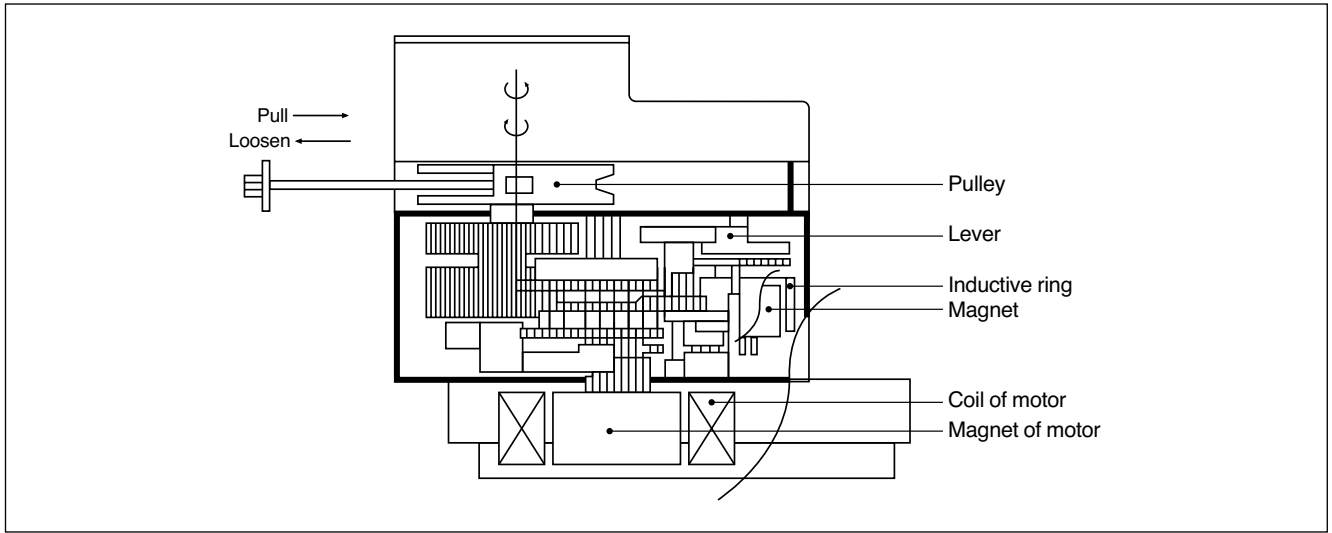
RESIDUAL TIME DISPLAY

When the START/HOLD button is pressed, the residual time (min.) is displayed on the time indicator, and it will be counted down according to the process.

When operation is finished, the TIME INDICATOR will light up **■** .

DRAIN MOTOR

STRUCTURE



FUNCTIONAL PRINCIPLE

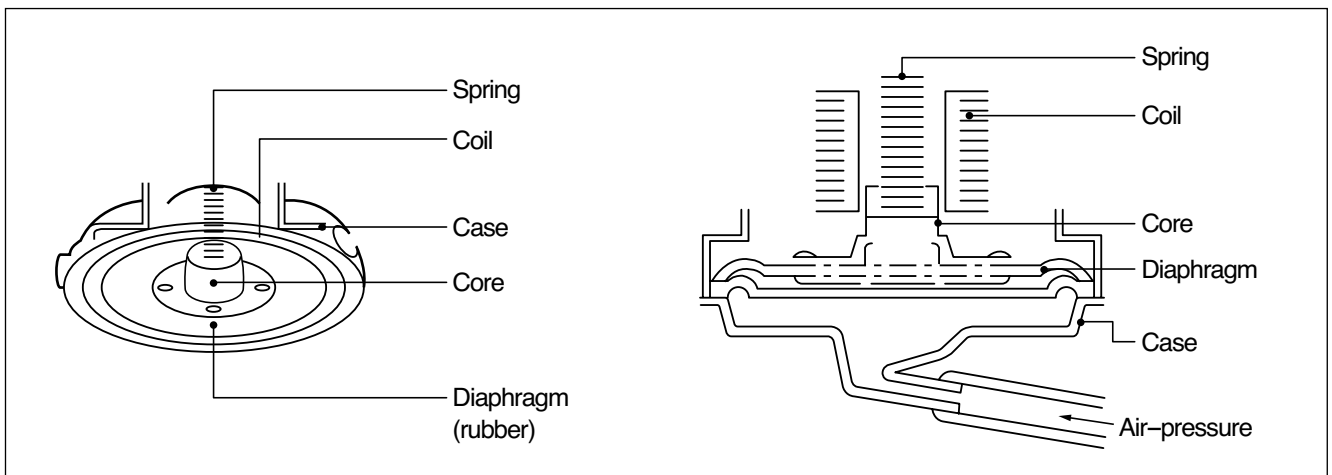
1. When the DRAIN MOTOR connected to the power source (AC 220V), the DRAIN MOTOR rotates with 900 r.p.m and revolves the pulley by gear assembly for reducing.
2. When the pulley is rotated, the pulley winds the wire to open the drain valve.
3. Therefore, rotation of pulley is changed to the linear moving of wire.
4. The wire pulls the brake lever of Gear Mechanism Ass'y within 5 seconds.
5. After the wire pulled, gear assembly is separated from motor and condition of pulling is held by operation of the lever.
6. When the power is turned off, the drain valve is closed because the wire returns to original position.

WATER LEVEL SWITCH

Water pressure of air room which is at the side of outer-tub is transmitted to the air room in the water level switch through air-tube. Diaphragm moves up and down by the transmitted pressure to move the core.

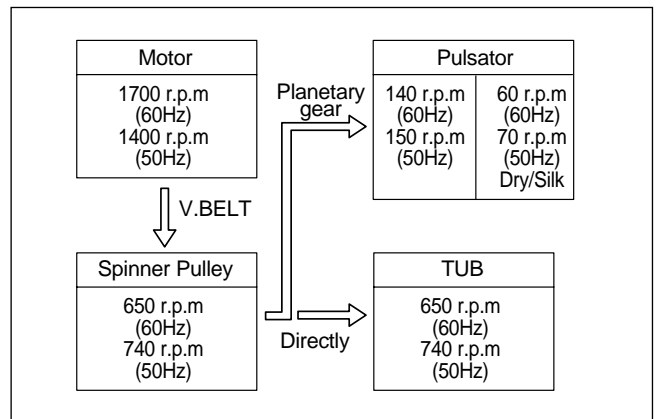
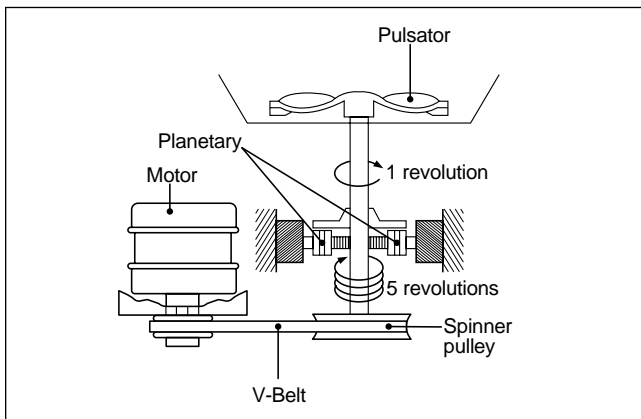
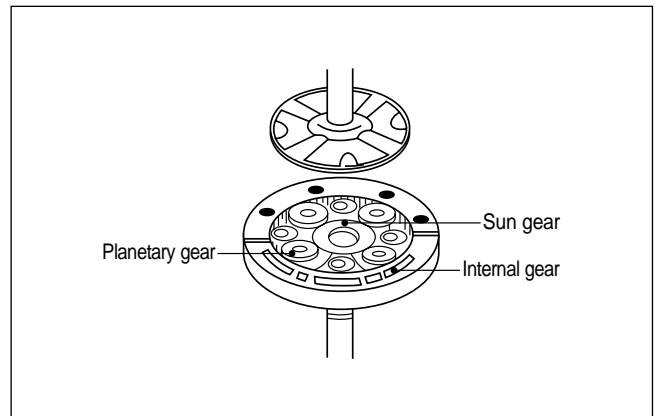
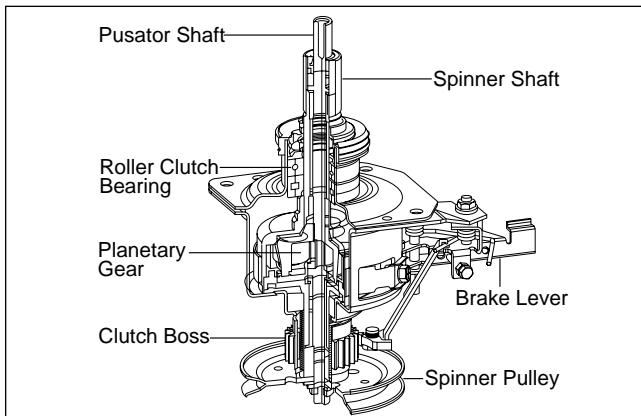
Movement of core transforms the inductance of coil by Henly's Law.

The generative frequency (Hertz) is obtained by this transformation of the coil inductance in the LC generative circuit.



GEAR MECHANISM ASS'Y

The proper water currents is made by the rotation of pulsator at a low speed (about 145 r.p.m) to prevent the damage to the small sized clothes.

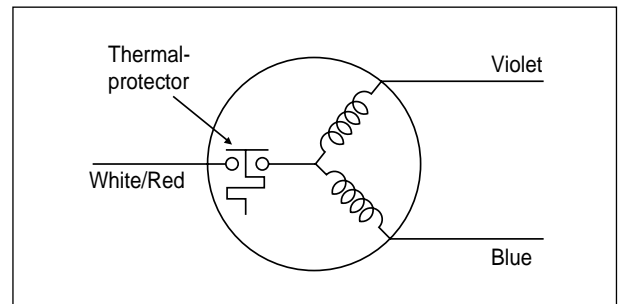


SAFETY DEVICE FOR MOTOR

In case of occurring disorder of motor caused by extreme-high voltage, over-heating, overload, safety devices (Thermal Protector) of motor can be operated and cut off the power sources automatically.

At this case, motor does not run.

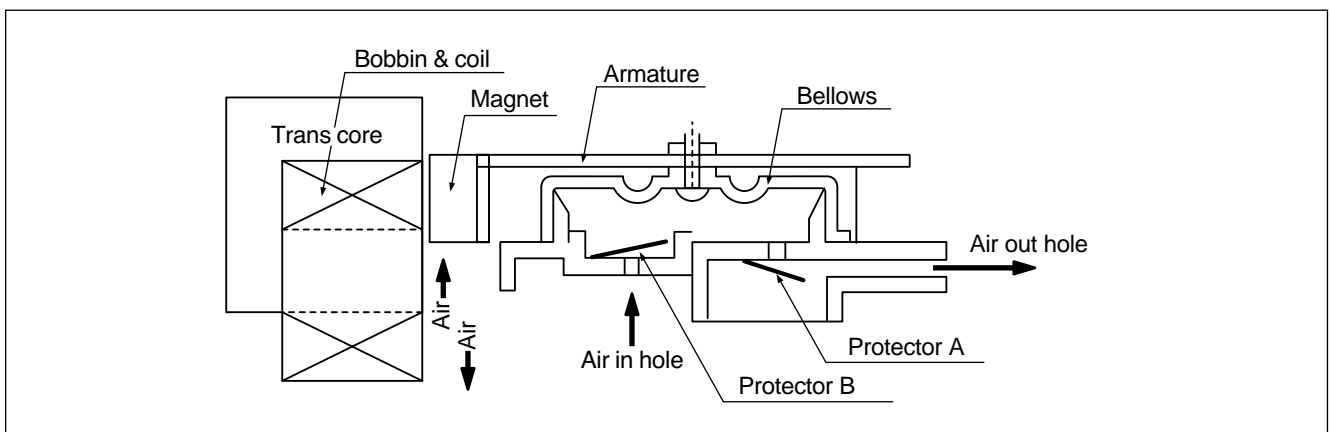
However, motor can be operated normally again about 1 hour later.



(Motor)

PRINCIPLE OF BUBBLE GENERATOR

STRUCTURE



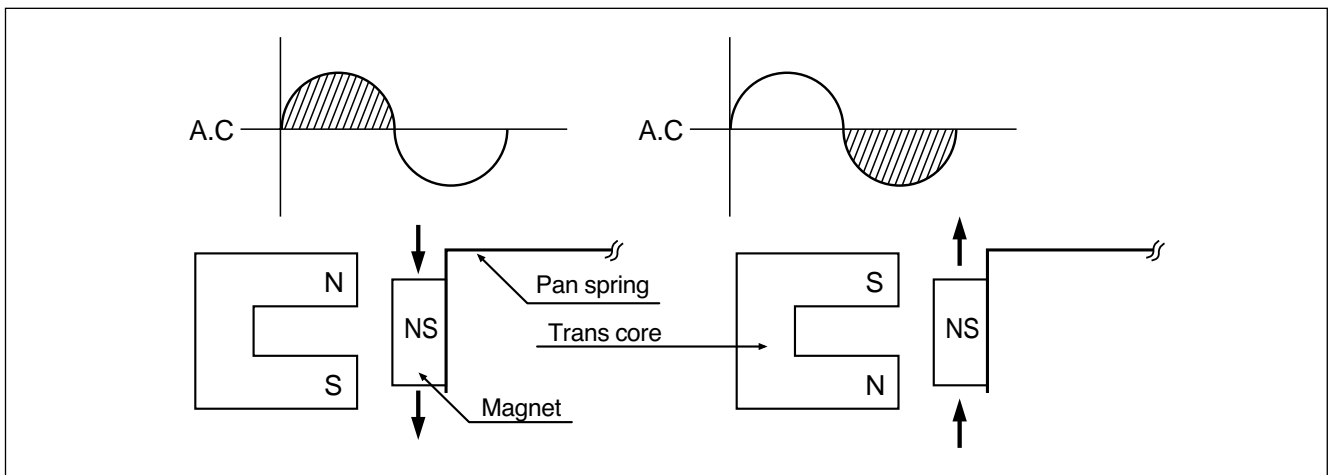
PRINCIPLE OF INTAKE & OUTLET OF THE AIR

INTAKE : ARMATURE moves to the upper side, and BELLOWS inhales the air. At same time, PROTECTOR B is open and A is close.

OUTLET: ARMATURE moves to the down side, and BELLOWS exhaust the air. At same time, PROTECTOR B is close and A is open.

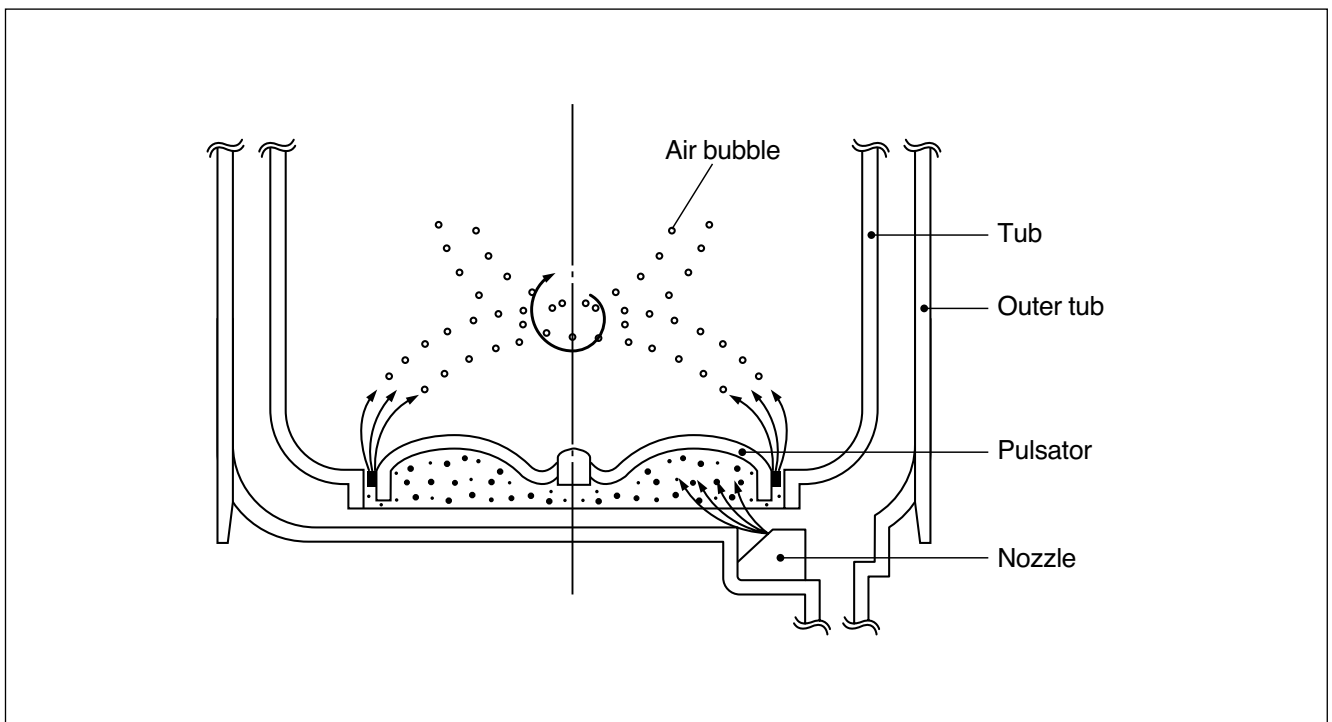
FUNCTIONAL PRINCIPLE OF TRANS & MAGNET

- A.C electric power's phase changes to 60 cycle/sec.
- Trans core's magnetic pole is changed by changing of A.C electric power's phase.
- The core repeat push and pull (3600 times/min) the armature magnet.



FUNCTIONAL PRINCIPLE OF BUBBLE WASHING MACHINE

ACROSS SECTION



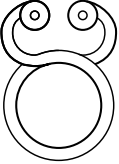
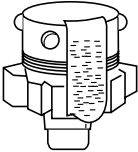
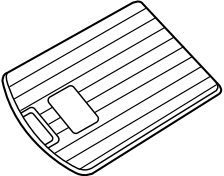
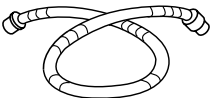
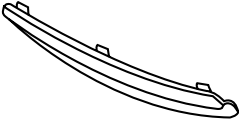
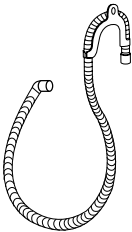
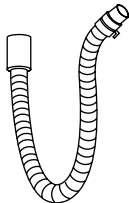
FUNCTIONAL PRINCIPLE

Bubble generator supplies the air from the bottom of outer tub to the inner space of pulsator, the air break up by pulsator's agitating spin. Air-bubble was created by the centrifugal force, and rise up.

3. STRUCTURE OF THE WASHING MACHINE

STRUCTURE OF WASHING MACHINE

ACCESSORIES

Hose Clamp 	Water Tap Adapter (COLD) Water Tap Adapter (HOT) [option]  In case of screw-shaped inlet hoses water tap adapters will be provided.
Under Base Cover 	Inlet Hose (COLD) Inlet Hose (HOT) [Option] 
Bottom Board Cover [Option] 	
Drain Hose [PUMP] 	[NON-PUMP] 

• COLD WATER INLET
After using the machine,
close the water faucet
and turn off the power.

• HOT WATER INLET [Option]

• SOFTENER INLET
Pour softener into the softener
inlet and it will be added the
tub just before the final rinse.

• BLEACH INLET

• CONTROL PANEL

• TUB
(SUS: DWF-8060
DWF-8090)

• UNDER BASE COVER

• BOTTOM BOARD COVER
[Option]

• LEG COVER
[Option]

• DETERGENT CASE

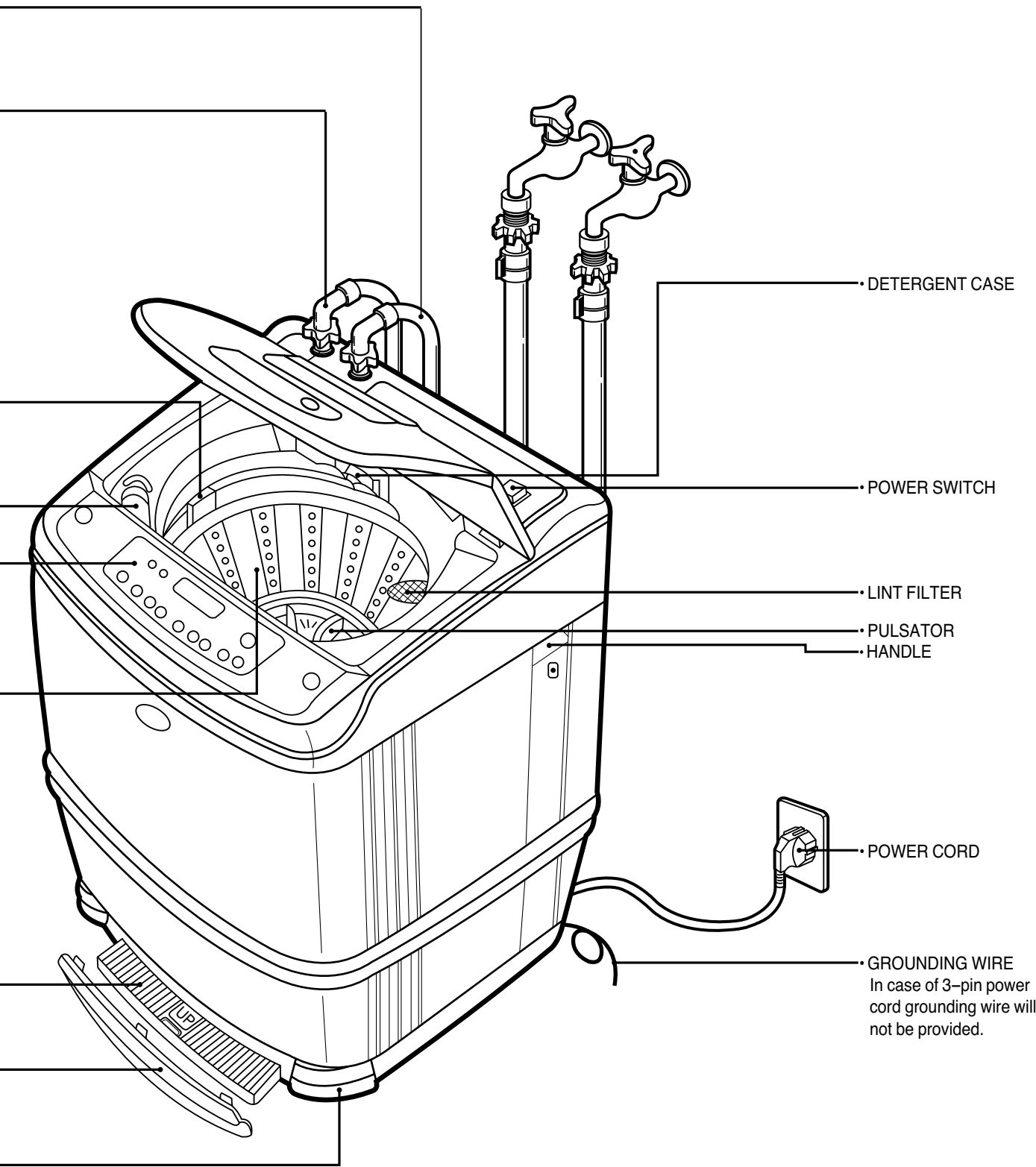
• POWER SWITCH

• LINT FILTER

• PULSATOR
HANDLE

• POWER CORD

• GROUNDING WIRE
In case of 3-pin power
cord grounding wire will
not be provided.



FUNCTION OF CONTROL PANEL (DRY)

- Control Panel**
- It has micom sensor.
 - As the button is pressed, course is selected by your desired.

Use of Switch

- Power Switch
–Press to turn the power On or Off
- After turning off the power, wait for over 3 seconds and then turn it On again.

OFF

ON

AUTO OFF

Button for Program Cancel

- It can be used to cancel the full-automatic course.
- When the button is pressed time, display will be light down. If you want to wash, rinse or spin, you can press one of the other buttons.

Wash Time Pre-engagement

- It can be used to pre-engage time for wash

Time Display

- The lamps easily indicate the option selection of wash program and process by letters.

Exclusive Spin Button

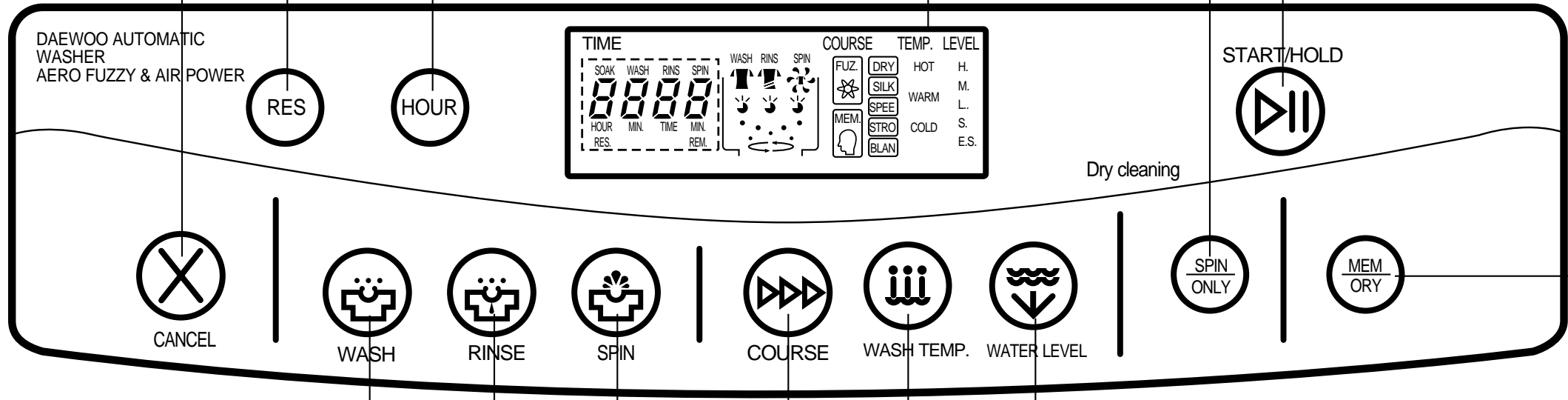
- It can be used to spin exclusively.

Start/Hold Button

- Operation and temporary stop are repeated as it is pressed.
- It will be repeated (operation), (temporary stop) according to the one time pressing or two times pressing.

Memory Button

- It can be used by remembering by your desire.



Wash Time Selector

- It can be used to adjust washing time.

Rinse Time Selector

- This button selects the number of time you want to rinse.

Speed Time Selector

- It can be use to adjust spin time.

Course Selection

- It can be used to select the full-automatic course.
- As the button is pressed, it will be selected following order;

DRY: Dry ▢Silk ▢ASpeed ▢A Strong ▢ABlanket ▢AFuzzy

Water Temperature Selection [Option]

- It can be used to select the water temperature according to the clothes being washed.
- If you select 'Dry/Silk Washing', selection for water temperature is selected 'Cold' by automatically in order to prevent the laundry from damage.

Water Level Selector

- It can be used to adjust amount of water according to the size of the load to be washed.
- If you select 'Dry/Silk Washing', Selection for water level is selected 'MID'; automatically in order to prevent the laundry from damage.

FUNCTION OF CONTROL PANEL (Non-Dry)

- Control Panel**
- It has micom sensor.
 - As the button is pressed, course is selected by your desired.

Use of Switch

- Power Switch
–Press to turn the power On or Off
- After turning off the power, wait for over 3 seconds and then turn it On again.

OFF

ON

AUTO OFF

Button for Program Cancel

- It can be used to cancel the full-automatic course.
- When the button is pressed time, display will be light down. If you want to wash, rinse or spin, you can press one of the other buttons.

Wash Time Pre-engagement

- It can be used to pre-engage time for wash

Time Display

- The lamps easily indicate the option selection of wash program and process by letters.

Exclusive Spin Button

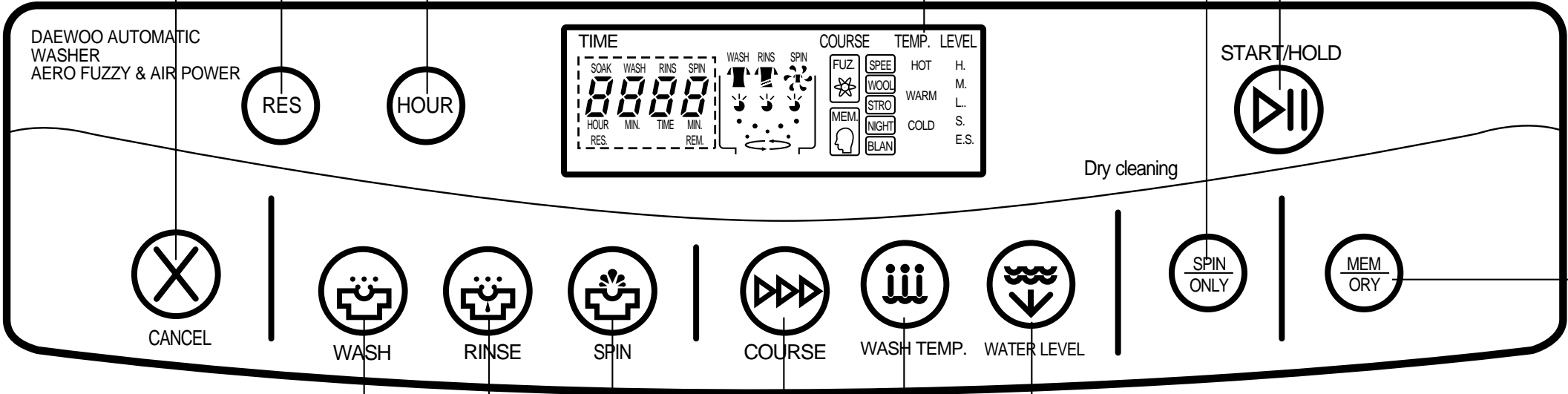
- It can be used to spin exclusively.

Start/Hold Button

- Operation and temporary stop are repeated as it is pressed.
- It will be repeated (operation), (temporary stop) according to the one time pressing or two times pressing.

Memory Button

- It can be used by remembering by your desire.



Wash Time Selector

- It can be used to adjust washing time.

Rinse Time Selector

- This button selects the number of time you want to rinse.

Speed Time Selector

- It can be use to adjust spin time.

Course Selection

- It can be used to select the full-automatic course.
- As the button is pressed, it will be selected following order;

NON-DRY: Speed ▢AW ▢o ▢l ▢A Strong ▢A Nigh ▢A Blanket ▢A Fuzzy

Water Temperature Selection [Option]

- It can be used to select the water temperature according to the clothes being washed.
- If you select 'Dry/Silk Washing', selection for water temperature is selected 'Cold' by automatically in order to prevent the laundry from damage.

Water Level Selector

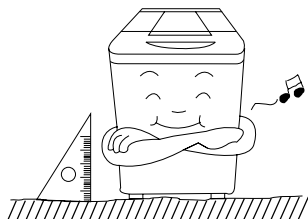
- It can be used to adjust amount of water according to the size of the load to be washed.
- If you select 'Dry/Silk Washing', Selection for water level is selected 'MID'; automatically in order to prevent the laundry from damage.

4. INSTALLATION INSTRUCTIONS

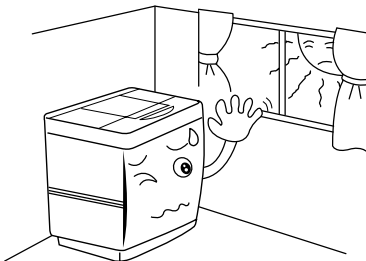
HOW TO INSTALL OF THE WASHING MACHINE

SELECTION OF THE INSTALLING PLACE

- Choose a place on a horizontal solid floor. When the washer is installed on unstable floor, it makes noise and vibration.



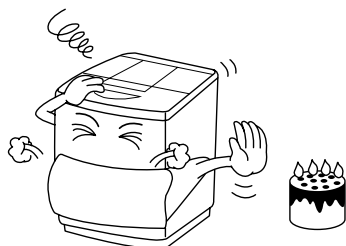
- Don't choose a floor where direct rays of the sun. Because the washing machine's color becomes different.



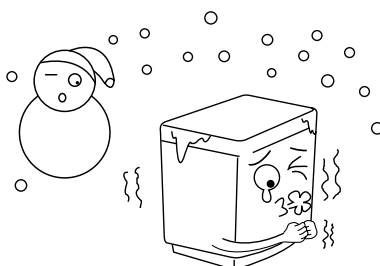
- Avoid installing it in a place where it can be exposed to rain that may cause it rust and leak.



- Coal gas may cause corrosion.



- Don't install in the place where it is anxious about being frozen in winter.



* NOTE

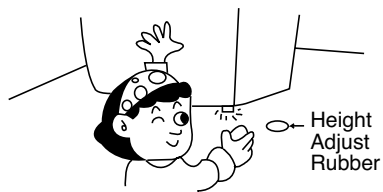
The opening must not be obstructed by carpeting when the washing machine is installed on a carpeted floor.

IN CASE THAT THE WASHER IS INCLINED

When the washer is installed on an unsuitable floor, it makes noise and vibration and occurs out of order.

1 Insert the Height Adjust Rubber

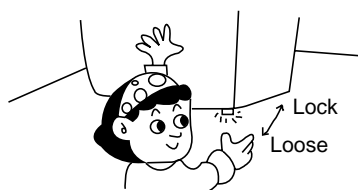
Insert the 'height adjust rubber' to the inclined direction. It can be adjusted as far as 30mm.



2 Height Setting

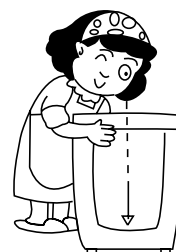
Control the height by turning the adjusting leg. After that turn the outer cap to be locked.

- Don't turn the adjusting leg to be separate.



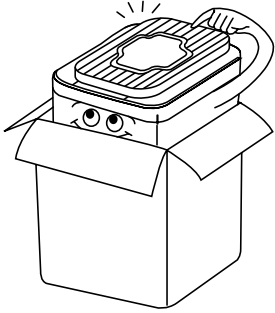
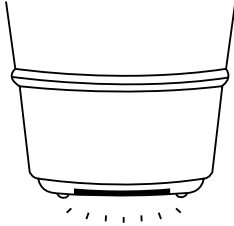
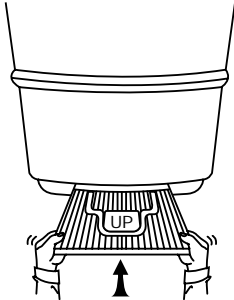
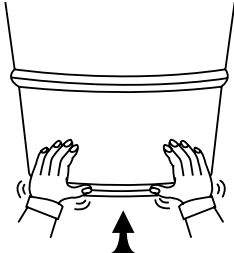
3 Check the Horizon

Check the position at the front center of the washer.

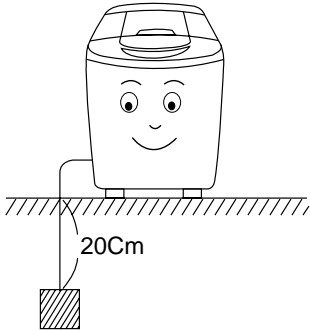
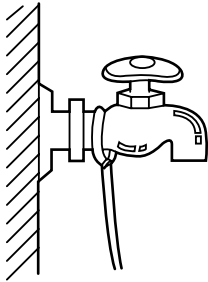
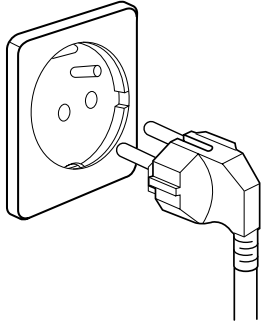


INSTALLATION OF THE UNDER BASE COVER

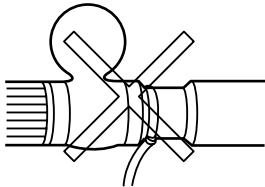
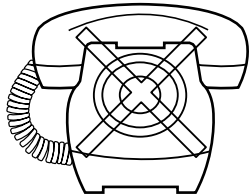
After the selection of the installing place is finished, you close the under base cover.

<p>1 Open the box packing, and it is on the washer.</p> 	<p>2 There is a inserting place under of the front side on the washer.</p> 	<p>3 Let the under base cover that can be shown the "UP" sign.</p> 	<p>4 Put it to enter bottom board cover rack surely. (DWF-7590TE)</p> 
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GROUNDING METHOD

<ul style="list-style-type: none"> • Attach the grounding wire to a copper plate or grounding rod and bury it in the ground.  <p>20Cm</p>	<ul style="list-style-type: none"> • Connect the grounding wire to a metal water faucet.  <p>* It is not use connecting the wire to the plastic pipe.</p>	<ul style="list-style-type: none"> • In the case of 3-core cord there is no need for a grounding wire. 
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DO NOT CONNECT THE GROUNDING WIRE TO SUCH A THING

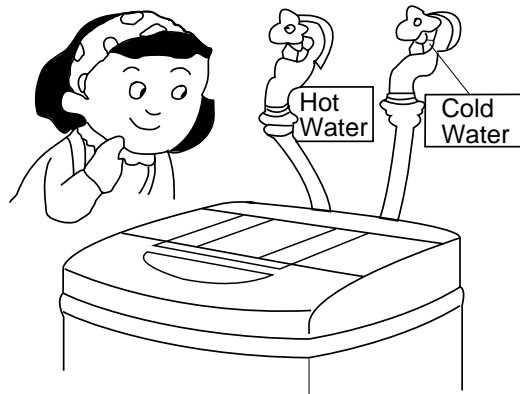
<ul style="list-style-type: none"> • Do not connect the gas tube because it is attended with danger of a explosion. 	<ul style="list-style-type: none"> • Do not connect to the telephone wire or a lightning rod because it is attended with danger of the strike fire. 
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HOW TO CONNECT THE INLET HOSE

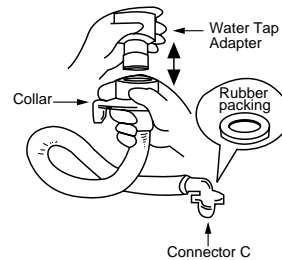
IN INSTALLING THE INLET HOSE

Be careful not to mistake in supplying hot and cold water.

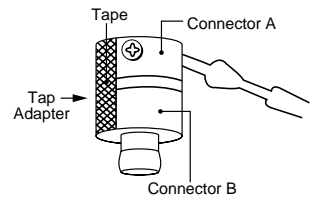
In using only one water tap, connect the inlet hose to the cold water inlet.



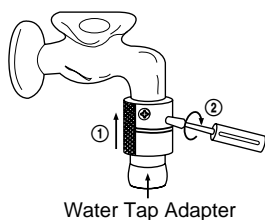
- 1** Pull down the collar of the inlet hose to separate it from the water tap adapter.



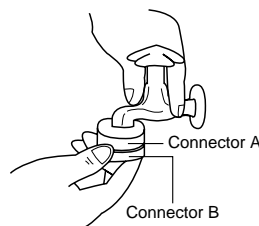
- 2** Loosen the four screws at the water tap adapter, but don't loosen the screws until they are separated from the water tap adapter.



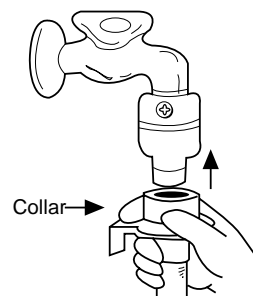
- 3** Connect the water tap adapter to the water tap, and tighten the four screws evenly while pushing up the adapter so that the rubber packing can stick to the water tap tightly.



- 4** Remove the tape, and screw connector B into connector A tightly.



- 5** Connect the inlet hose to the water tap adapter by pulling down the collar of the hose end.



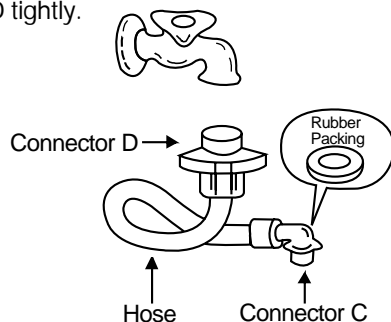
- 6** Connect the connector C of the inlet hose to the water inlet of the washer by turning it clock-wise to be fixed tightly.



- Please check the rubber packing inside the connector C of the inlet.

• FOR SCREW-SHAPED TAP

- 1** Connect the inlet hose to the water tap by screwing the connector D tightly.

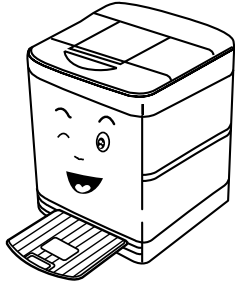


- 2** Connect the connector C of the inlet hose to the water inlet of the washer by turning it clockwise to be fixed tightly.

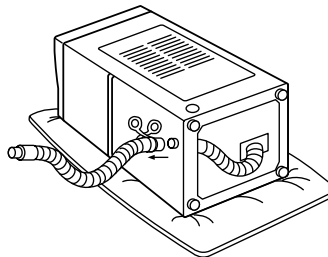


HOW TO REROUTE THE DRAIN HOSE

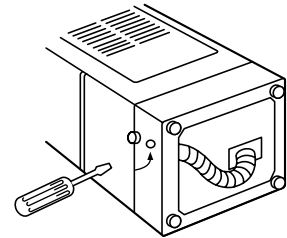
- 1** Pull out the under base cover to the arrow direction.



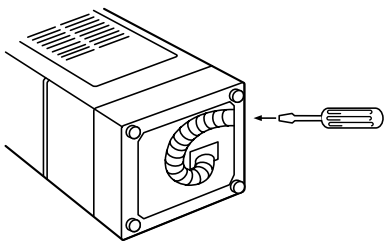
- 2** After spreading blanket or unit box, lay the washer as the below figure. And detach the outside drain hose with widening drain clip.



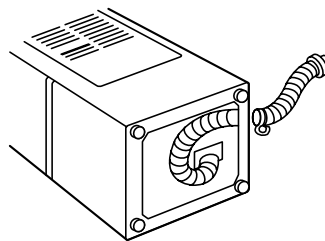
- 3** Detatch the inside drain hose fixing screw with ϕ 1 driver.



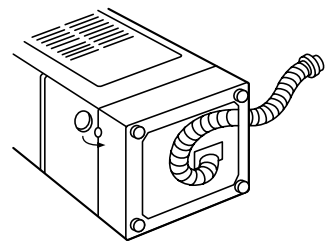
- 4** After detaching the drain hole cover of the hoping direction, insert the inside drain hose. And then fasten the fixing screw.



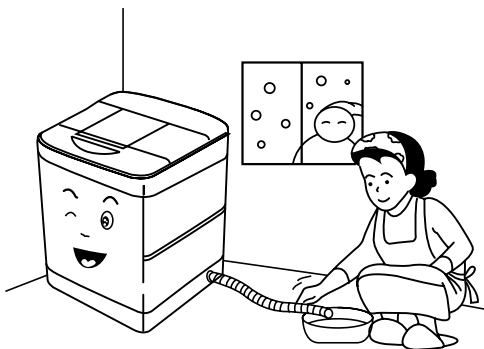
- 5** Insert the outside drain hose together with the hose-fixing clip.



- 6** Insert the detached drain-hole.



HOSE TO USE IN WINTER



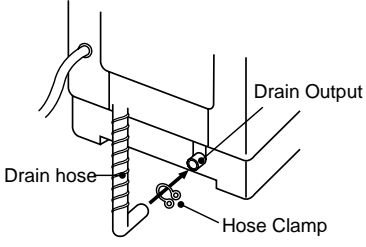
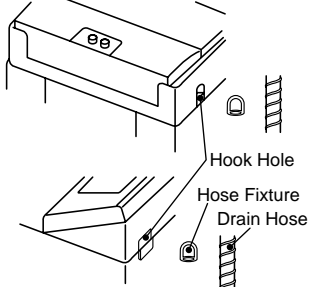
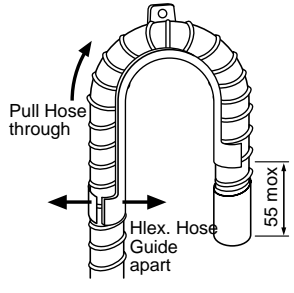
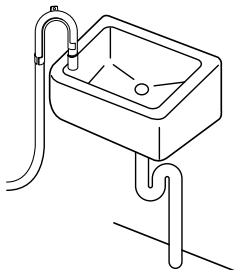
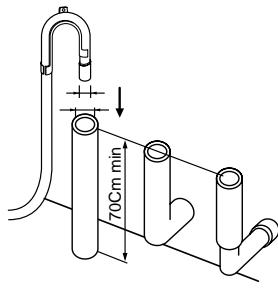
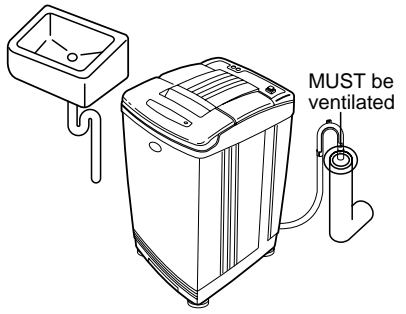
- To avoid the washing machine's being frozen.
 - Remove the inside water of the washing machine completely.
 - Remove the inside water of the inlet-hose and drain-hose completely.
- In case of being frozen.
 - Dip the detached inlet-hose in the hot water (about 50°C)
* (Don't use above 50°C surely).
 - Leave the tub alone for 10 minutes with pouring the hot water. (about 50°C)
 - Check the drain and inlet's operation after attaching the inlet hose.

HOW TO INSTALL THE DRAIN HOSE

NOTE IN USING THE DRAIN HOSE

Never forget to install drain hose before operating this washing machine.

There are a drain hose, a hose clamp, a hose fixture and a hose guide in the washing machine.

<p>1 Connect the drain hose to the drain outlet at the back side of the washing machine, and fasten it tightly with the clamp supplied.</p> 	<p>2 Insert the hose fixture into hook hole at the side of the body, and fix the drain hose by inserting it into the hose fixture.</p> 	<p>3 Attach the hose guide, included in the accessory kit, to guide the drain hose over the tub or standpipe.</p> 
<p>4 Hook the drain hose to the edge of the tub, paying attention that there are no bends or constrictions along the drain hose</p> 	<p>Or, connect the drain hose to a standpipe of a diameter greater than that of the drain hose and at a height of min. 70cm.</p> 	<p>5 Position the washing machine next to the wall.</p> 

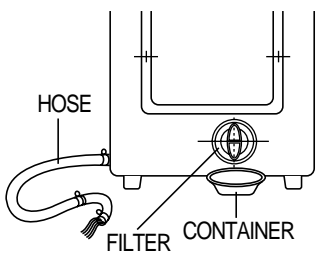
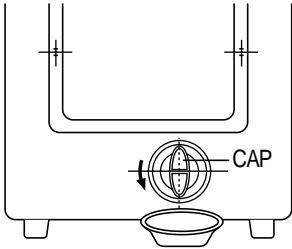
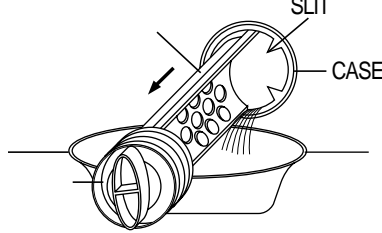
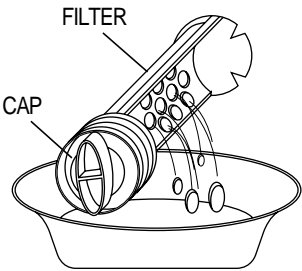
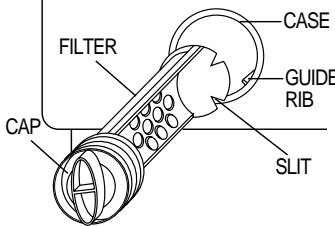
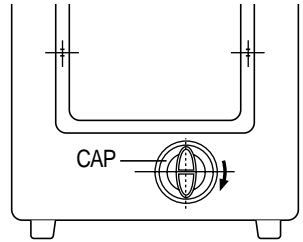
NOTES:

1. Keep the drain hose fixed tightly in the hose fixture, or let the highest point of the drain hose be more than 1m above the floor.
2. Be sure that the height of the drain hose must be less than 1.5m above the floor.
If not so, the water in the washer could not drain.
3. The hoseguide **MUST** be fitted to the drain hose. The drain hose could not extend more than 55mm from the end of the hose guide. This is to prevent 'SYPHONING'.
If necessary the drain hose can be trimmed to length.

HOW TO TO CLEAN DRAIN FILTER [Pump]

In this washer machine, the drain filter is equipped at the back side of it.
This drain should be cleaned frequently (every 5 times of use) for its smooth operation.
And this should be cleaned frequently (every 5 times of use) for its smooth operation.
Drain problem could be caused if the drain filter is not cleaned at proper time.
Please keep it clean.

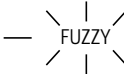













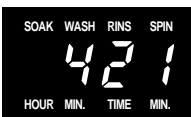



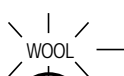


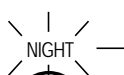

In case you clean the drain filter, please follow the instructions as below.

<p>1 Remove the remained water</p> <p>Put down the remained water in the hose. And put a container under the filter to collect water.</p> 	<p>2 Unscrew the cap</p> <p>Turn the cap counter clockwise.</p> 	<p>3 Release the filter assembly</p> <p>Pull out the filter assembly off the case of the main body.</p> 
<p>4 Remove the remained water</p> <p>Clean the drain filter removing the foreign stuffs.</p> 	<p>5 Unscrew the cap</p> <p>Put in the filter along the guiding prominence of the case. Please note the right position of the filter adjusting the groove to the guide rib.</p> 	<p>5 Release the filter assembly</p> <p>Turn the cap clockwise tightly.</p> 

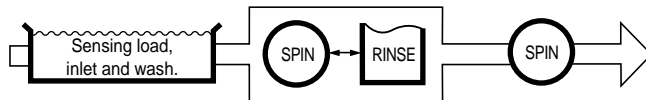
NOTES: During the operation, the "OE" signal means drain error can be displayed on the control panel.
In this case, the main cause of that problem is the blocking of the drain filter.
If you clean the drain filter following above instructions, you could continue the normal operation of the washing machine to reset the program, please turn the power off and on again.

5. OPERATING INSTRUCTION

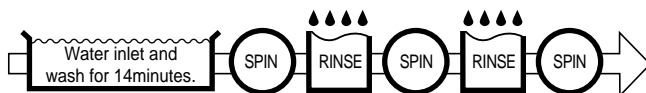
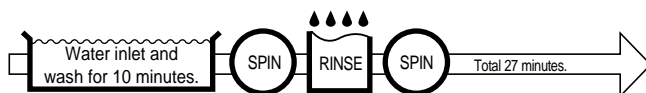
PROCEDURE OF FULL-AUTOMATIC WASHING

Prepare for washing. αD Pressing the power switch. αD Put the wash in. αD Select the detergent.	1 Full-Automatic	2 Select the Course	3 Procedure of Pressing the Button
	FUZZY (SENSOR)	This selection is for general washing.	 
	SPEED 	This selection is effective for washing light or less dirty wash.	 
	STRONG 	This selection is effective for blue-jean, climbing clothes, ruck-sack, sports wear, etc...	 
	BALANKET 	This selection is effective for blanket, curtain, carpet, etc... * 4kg's limitation for one-time-wash.	 
	DRY series DRY 	This selection is effective for high quality sweater, cardigan, all-wool clothes and all-wool garments. * Appropriate volume of washes are two or three suits of clothes.	 
	SILK 	This selection is effective for silk lingerie, stocking, silk curtains, and other silk garments. * Appropriate volume of washes are five suits of silk blouses.	 
	NON-DRY series WOOL 	This selection is effective for high quality sweater, silk, underwear, stocking, etc.. * Do not put in the wash marked with 'dry-cleaning'. * 2kg's limitation for one-time-wash.	 
	NIGHT 	This selection is for a night-washing housewife who has no opportunity at day time.	 

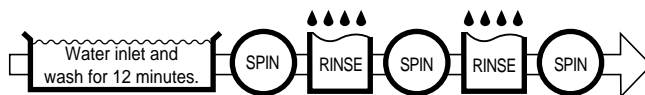
4 Procedure of Washing (Washing machine does it automatically.)



Artificial brain computer controls full procedure proper to wash load automatically.



A strong course's water flow is (R) (L) (R) (L) (R) (L) (R) (L) (R) (L)



A blanket course's water flow is (R) (R) (L) (L) (R) (L) (R) (L)



The rotation velocity at a part of dotted line is decreasing for protection of wool, etc. damage.



The rotation velocity at a part of dotted line is decreasing for protection of silk, from damage.




















End of washing informed by buzzer.

After 10 minutes later from the end of the washing, the power switch is turned off automatically.

After Washing





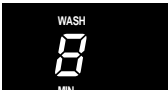




- Close the water tap and separate it from the inlet-hose.
If not so, the inlet valve is excessive by the water pressure.
- Take off plug.



PARTIAL SELECTIONS AMONG WASH, RINSE AND SPIN

1 Washing Procedure by Your Desire	2 Pressing the button	
ONLY SPIN	<p>Cancel the set program with pressing the "cancel" Button.</p>  <p>* In case of canceling the program while the washing machine operates, press the "Start/Hold" button first, and then press "Cancel" Button.</p>	ONLY SPIN
ONLY WASH		  
ONLY RINSE		  
WASH ⇄ RINSE ⇄ SPIN		  
WASH ⇄ RINSE		  
WASH ⇄ SPIN		  
RINSE ⇄ SPIN		  

EXPLAIN FUNCTION OF BUTTON


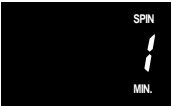


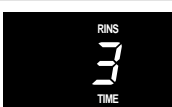


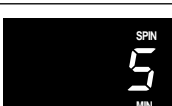


WASH

	After input water, wash in 3 minutes.		After input water, wash in 14 minutes.
	After input water, wash in 6 minutes.		After input water, wash in 20 minutes.
	After input water, wash in 8 minutes.		After input water, wash in 30 minutes.
	After input water, wash in 10 minutes.		Soak wash; soak in 30 minutes before the washing. And the washing is progress.
	After input water, wash in 12 minutes.		

3 Start/Hold Button	4 Washing Procedure	5 End of Washing
<p>Press the "Start/Hold" button.</p> <p>START/HOLD</p>  <p>* If one more pressed, the washing machine will be stopped. For keeping operation continuously to the set program, press another time.</p>	<p>The course is processed by your desire.</p> 	<p>End of washing informed by buzzer.</p> <p>* After 10 minutes later from the end of the washing, the power switch is turned off automatically.</p>

RINSE

SPIN

 <p>1 time</p>	 <p>Spin in 1 minute.</p>
 <p>2 times</p>	 <p>Spin in 3 minutes.</p>
 <p>3 times</p>	 <p>Spin in 4 minutes.</p>
 <p>4 times</p>	 <p>Spin in 5 minutes.</p>
 <p>5 times</p>	 <p>Spin in 9 minutes.</p>

6. PROGRESS CHRT

		WASH										RINSE (1)										RINSE (2)										SPIN								TOTAL OPERATING TIME										
		SENSING	WATER SUPPLY	SOAK	WASH (BC:15")						DRAIN	BALANCE SPIN	SPIN				A+STOP	WATER SUPPLY	RINSE (BC:15")		DRAIN	BALANCE SPIN	SPIN				A+STOP	WATER SUPPLY	RINSE (BC:15")		DRAIN	BALANCE SPIN	SPIN				A+STOP	BUZZER												
		15 sec	4 min	30 min	30 min	20 min	14 min	12 min	10 min	8 min	6 min	4 min	2 min	30 sec	2 min	30 sec	1 min	40 sec	20 sec	90 sec	40 sec	4 min	3 min	30 sec	2 min	2 min	30 sec	2 min	30 sec	1 min	40 sec	20 min	90 sec	40 sec	4 min	3 min	30 sec	2 min	2 min		30 sec	5 min	4 min	3 min	30 sec	90 sec	10 sec			
FUZZY	H																																																	53-10
	M																																																	51-10
	L																																																	45-10
	S																																																	42-10
SPEED	H																																																	33-20
	M																																																	33-20
	L																																																	33-20
	S																																																	33-20
BLANKET	H																																																	53-10
	M																																																	53-10
	L																																																	53-10
	S																																																	53-10

1. B.C.: 15": THIS IS A FUNCTION TO FLAT MOVING PULSATOR, LEFT, RIGHT FOR 15 SECONDS TO PREVENT ECCENTRICITY OF THE LAUNDRY AFTER WASHING. (EXCEPT DRY, SILK)
2. THE 'A' INDICATES THE INERTIA RUNNING AT MOTOR STOP CONDITIONS.
3. THE 'W/S' INDICATES THE RINSE PROCESS ON WATER SUPPLY CONTINUOUSLY.

4. PROCESS OF E.SMALL WATER LEVEL IS THE SAME AS PROCESS OF SMALL WATER LEVEL
5. THE FILL TIME AND DRAIN TIME WILL VARY ACCORDING TO THE WATER PRESSURE, HOSE LENGTH, AND AFTER CONDITIONS.
6. DURING THE BALANCE SPIN. THE TUB WILL ROTATE AND STOP SEVERAL TIMES INTERMITTENTLY.
7. PROCESS OF RINSE 2 TIME IS THE SAME AS RINSE PROCESS ON 'SENSOR COURSE'.

		WASH										RINSE (1)										RINSE (2)										SPIN						TOTAL OPERATING TIME						
		SENSING	WATER SUPPLY	SOAK	WASH (BC:15")							DRAIN	BALANCE SPIN	SPIN				A+STOP	WATER SUPPLY	RINSE (BC:15")				DRAIN	BALANCE SPIN	SPIN				A+STOP	WATER SUPPLY	RINSE (BC:15")				DRAIN	BALANCE SPIN		SPIN				A+STOP	BUZZER
		15 SEC	4 MIN	30 MIN	30 MIN	20 MIN	14 MIN	12 MIN	10 MIN	8 MIN	6 MIN	4 MIN	2 MIN	30 SEC	2 MIN	30 SEC	1 MIN	40 SEC	20 SEC	90 SEC	40 SEC	4 MIN	3 MIN	30 SEC	2 MIN	2 MIN	30 SEC	2 MIN	30 SEC	1 MIN	40 SEC	20 MIN	90 SEC	40 SEC	4 MIN	3 MIN	30 SEC		2 MIN	2 MIN	30 SEC	5 MIN	4 MIN	3 MIN
STRONG	H																																					51-10						
	M																																					51-10						
	L																																					51-10						
	S																																					51-10						
DRY	H																																					33-00						
SILK	M																																					31-00						
WOOL	H																																					36-30						
	M																																					36-30						
	L																																					36-30						
	S																																					86-10						
NIGHT	H																																					86-10						
	M																																					86-10						
	L																																					86-10						
	S																																					86-10						

* In case of the pump model, it doesn't perform water input rinse (W/S).

NIGHT COURSE HAVE 3 TIMES RINSE PROCESS.



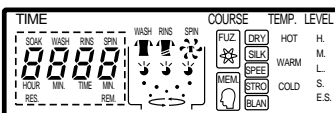
		WASH										RINSE (1)										RINSE (2)										SPIN										TOTAL OPERATING TIME
		SENSING	WATER SUPPLY	SOAK	WASH (BC:15")					DRAIN	BALANCE SPIN	SPIN			A+STOP	WATER SUPPLY	RINSE (BC:15")		DRAIN	BALANCE SPIN	SPIN			A+STOP	WATER SUPPLY	RINSE (BC:15")		DRAIN	BALANCE SPIN	SPIN			A+STOP	BUZZER								
		15 sec	4 min	30 min	30 min	20 min	14 min	12 min	10 min	8 min	2 min	30 sec	2 min	1 min 30 sec	1 min	40 sec	90 sec	4 min	3 min	2 min 30 sec	2 min	2 min	30 sec	2 min	1 min 30 sec	1 min	40 sec	90 sec	4 min	3 min	2 min 30 sec	2 min	2 min	30 sec	5 min	4 min	3 min	30 sec	90 sec	10 sec		
SOAK	H	Process of selected course.																																						34•+		
	H	Process of selected course.																																						34•+		
	M	Process of selected course.																																						34•+		
	L	Process of selected course.																																						34•+		
WASH ONLY	H																																							18•10		
	M																																							16•10		
	L																																							14•10		
	S																																							12•10		
SPIN ONLY	9																																							13•10		
	5																																							9•10		
	4																																							8•10		
	3																																							7•10		
	1																																							4•10		

		WASH										RINSE (1)								RINSE (2)								SPIN								TOTAL OPERA- TING TIME															
		SENSING	WATER SUPPLY	SOAK	WASH (BC:15")						DRAIN	BALANCE SPIN	SPIN			A+STOP	WATER SUPPLY	RINSE (BC:15")		DRAIN	BALANCE SPIN	SPIN			A+STOP	WATER SUPPLY	RINSE (BC:15")		DRAIN	BALANCE SPIN	SPIN			A+STOP	BUZZER																
					15 sec	4 min	30 min	30 min	20 min	14 min			12 min	10 min	8 min			2 min	30 sec			2 min	1 min 30 sec	1 min			40 sec	90 sec			4 min	3 min	30 sec				2 min	2 min	30 sec	2 min	1 min 30 sec	1 min	40 sec	90 sec	4 min	3 min	30 sec	2 min	2 min	30 sec	5 min
RINSE (1 TIME)	H																																																		
	M																																																		
	L																																																		
	S																																																		
RINSE (2 TIME)	H																																																		
	M																																																		
	L																																																		
	S																																																		
RINSE (3 TIME)	H																																																		
	M																																																		
	L																																																		
	S																																																		

7. HOW TO CHECK THE P.C.B. ASS'Y

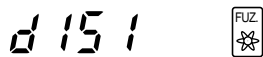
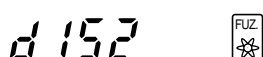

COURSE 1

Keep pushing three button (WASH, RINSE, SPIN SELECTOR) together and turn on the power switch.

	DISPLAY	FUNCTION
1		State of first lighting.
2		Temperature which sensing thermistor. LO: Thermistor open. HI: Thermistor short.
3		All LED light 8 times and go back to first stage.

COURSE 2







processing COURSE 1, push the spin selector once or three times according to desire check mode.

Time to push the spin button	DISPLAY	FUNCTION
1st time		Pulsator rotate without water in the tub and bubble pump on.
2nd time		Drain ⇄ Spin ⇄ Cold water ⇄ Hot water ⇄ Pulsator rotate (right) ⇄ Bubble ⇄ Pulsator rotate (left) ⇄ Auto power off.
3rd time		All LED light 8 times and go back to first stage.

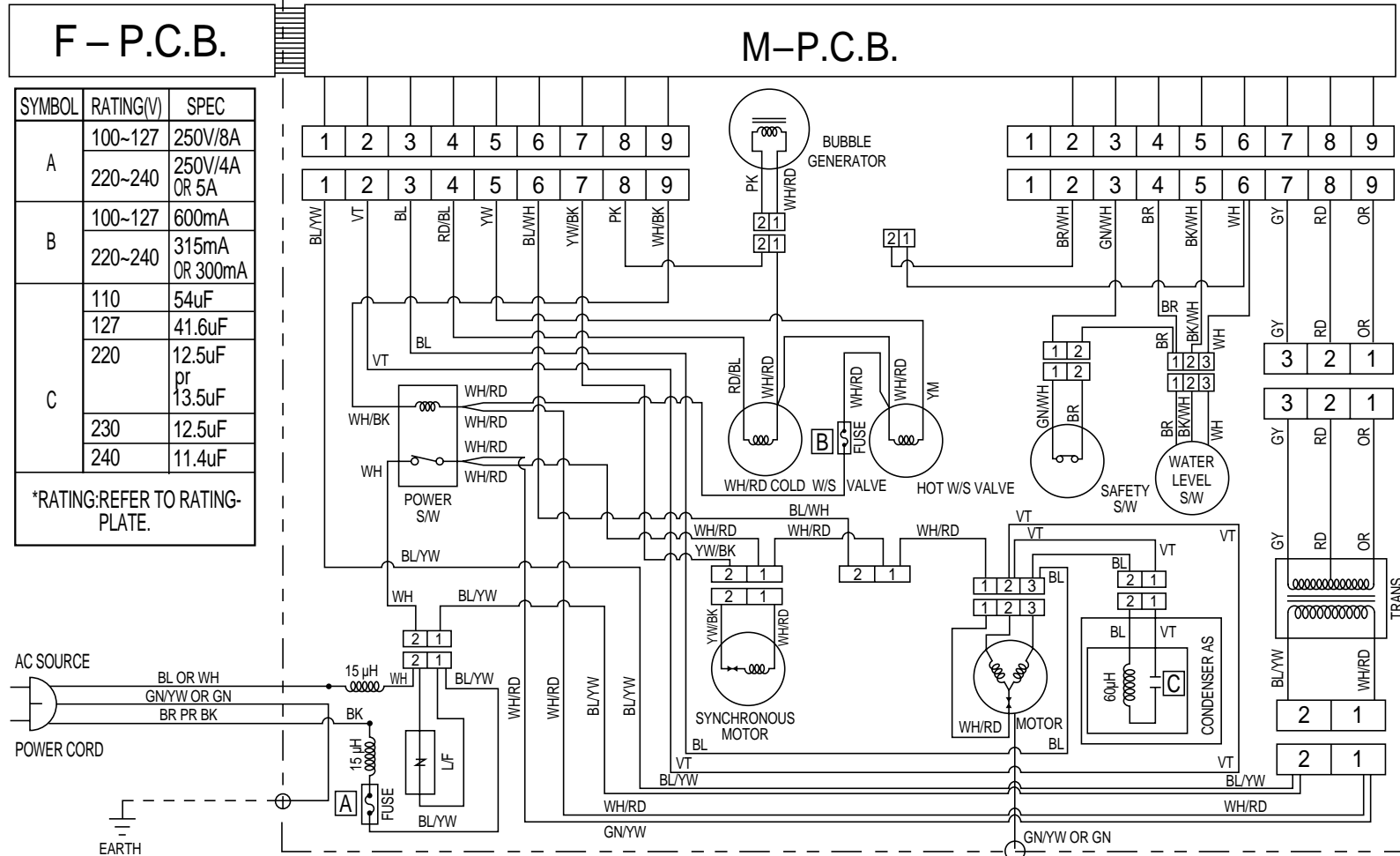
COURSE 3

How to upgrade of water level.

Processing "COURSE 2", push button below diagram.

	DISPLAY	FUNCTION
		Standard stage.
		Upgrade of water level.
		Fix the changing water level.

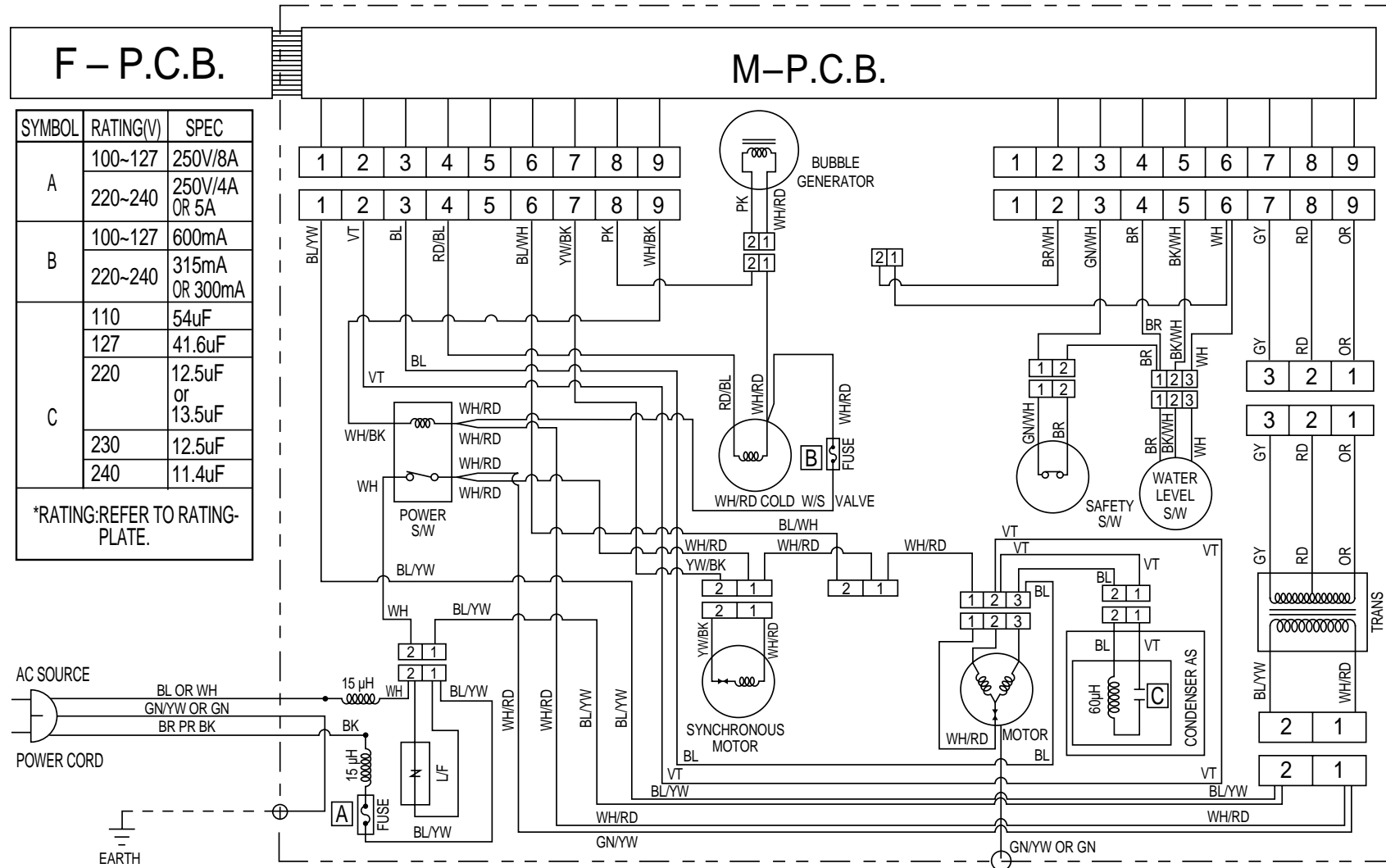
WIRING DIAGRAM



• DWF-7560/7590, 8060/8090 Non-Pump

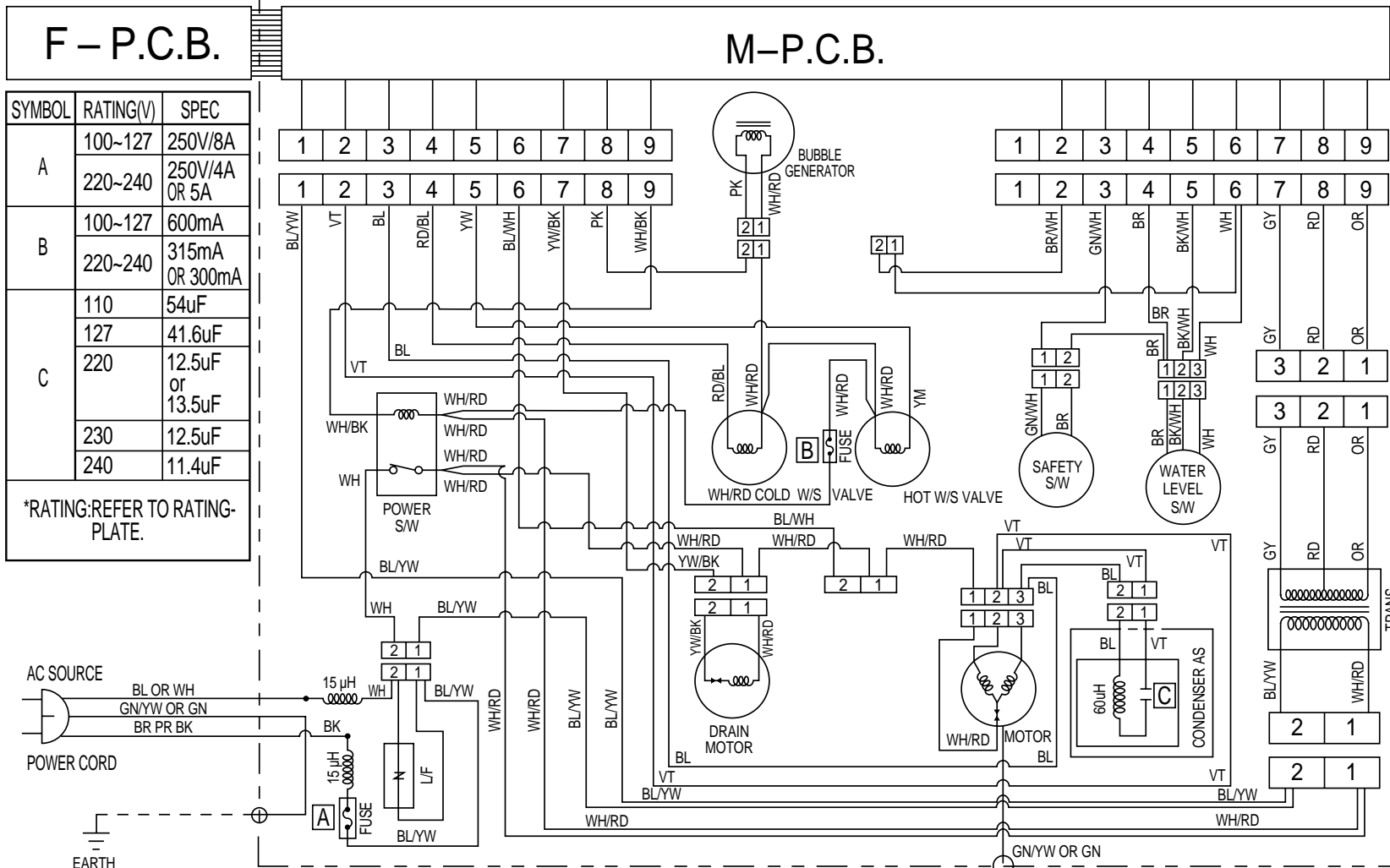
8. WIRING DIAGRAM

WIRING DIAGRAM



• DWF-7560/7590, 8060/8090 Non-Pump Cold Only

WIRING DIAGRAM



- DWF-7560/7590, 8060/8090 Pump

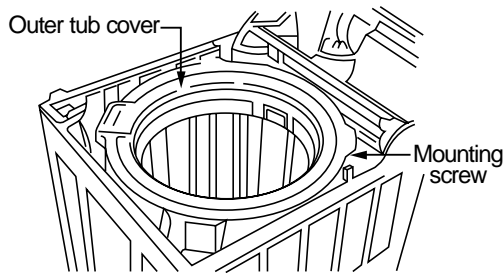
9. DIRECTIONS FOR DISASSEMBLY AND ADJUSTMENT

WARNING

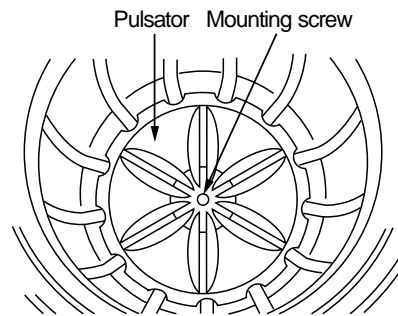
BEFORE ATTEMPTING TO SERVICE OR ADJUST ANY PART OF THE WASHING MACHINE, DISCONNECT THE POWER CORD FROM THE ELECTRIC OUTLET.

GEAR MECHANISM ASS'Y REPLACEMENT

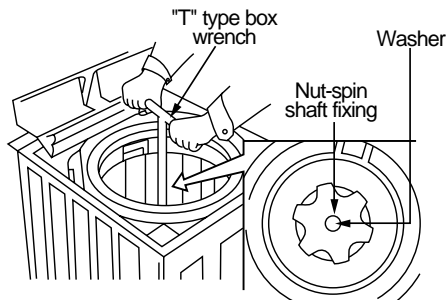
- Raise the top plate on the outer cabinet.
- Loosen four screws mounting outer tub cover and remove outer tub cover from the tub ass'y.



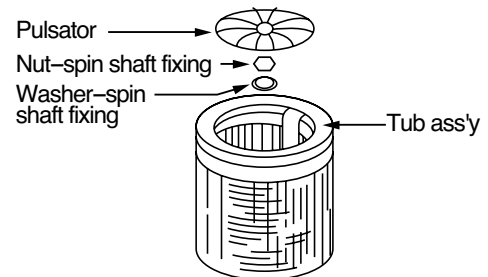
- Loosen the pulsator mounting screw and remove pulsator.



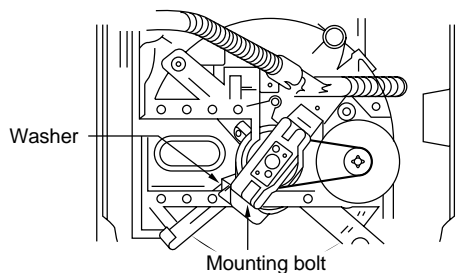
- Remove the pulsator washer.
- Remove the spinner shaft flange nut by using 'T' type box wrench.



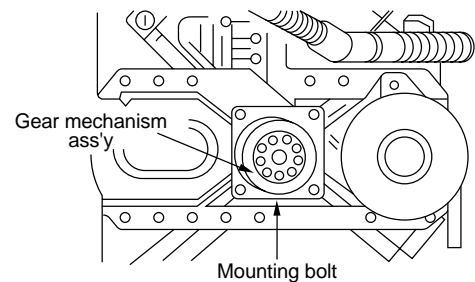
- Remove the tub ass'y.



- Lay the front of the washer on the floor.
- Remove four bolts mounting the plate-gear protect by using a box wrench and remove plate-gear protect.
- Remove the V-belt.



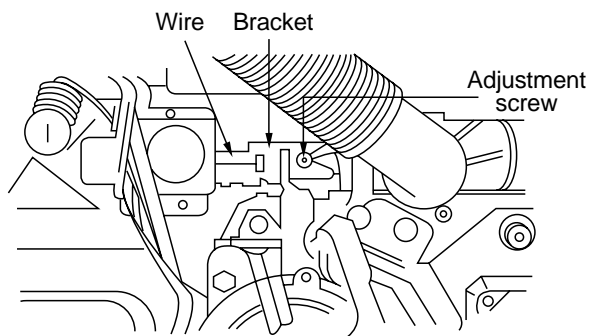
- Remove four bolts mounting the gear mechanism ass'y by using a box wrench.
- Pull out the gear mechanism ass'y.



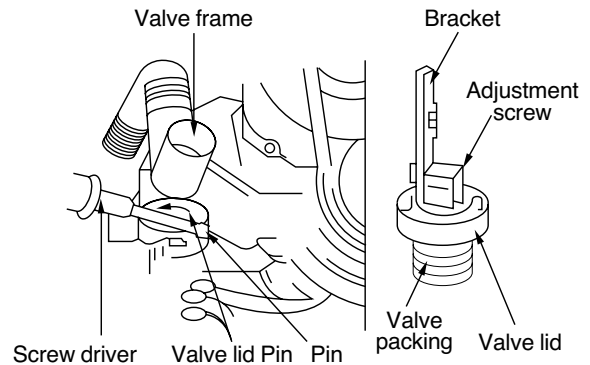
NOTE: To assemble the gear mechanism ass'y, reverse the disassembly procedure.

DRAIN MOTOR AND VALVE REPLACEMENT

- Lay the front of the washer on the floor.
- Loosen the adjustment screw and four bolts mounting the drain motor.
- Take out the wire of drain motor from the bracket.

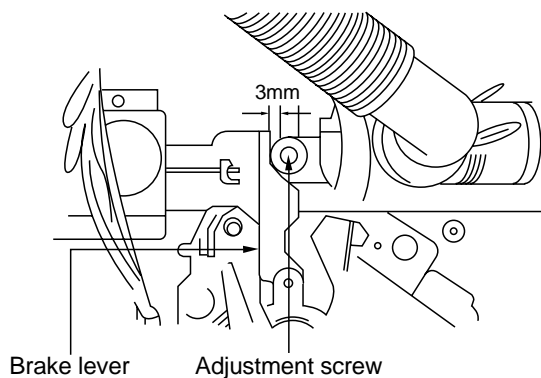


- Separate the drain motor from the bracket.
- Turn the valve lid by using screw driver as shown in figure and remove the valve lid from the valve frame.

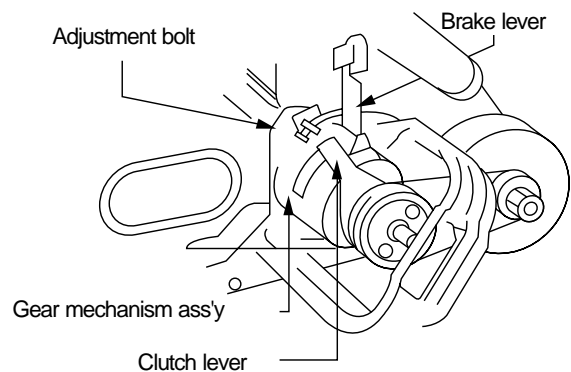


BRAKE ADJUSTMENT

- Loosen the adjustment screw fastening the bracket and place the adjustment screw to the brake lever as shown in figure.
- Tighten the adjustment screw completely.



- Loosen the adjustment bolt and turn the adjustment bolt until the end of the bolt touches to the brake lever.
- Tighten the lock nut and apply a small amount of paint-lock.

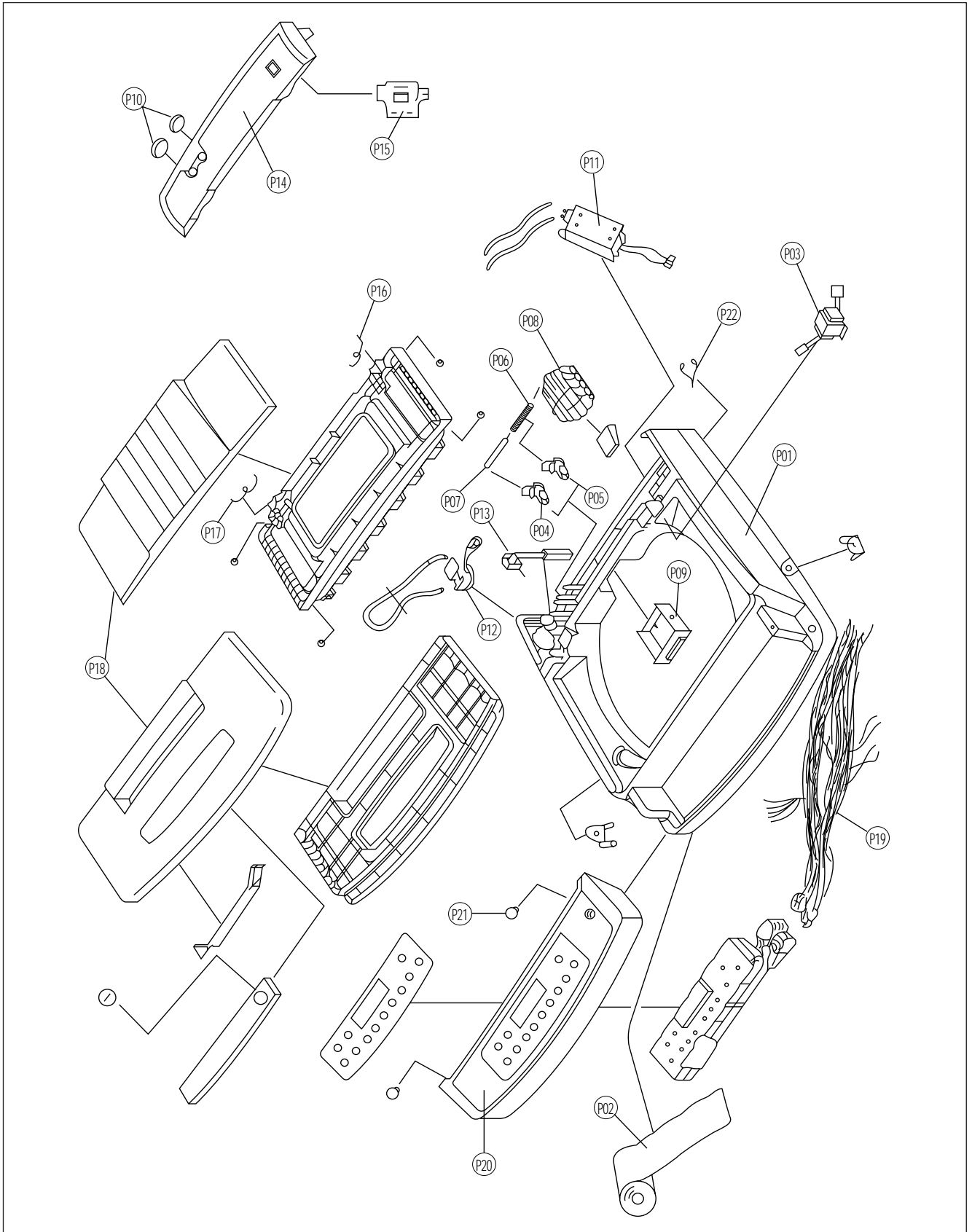


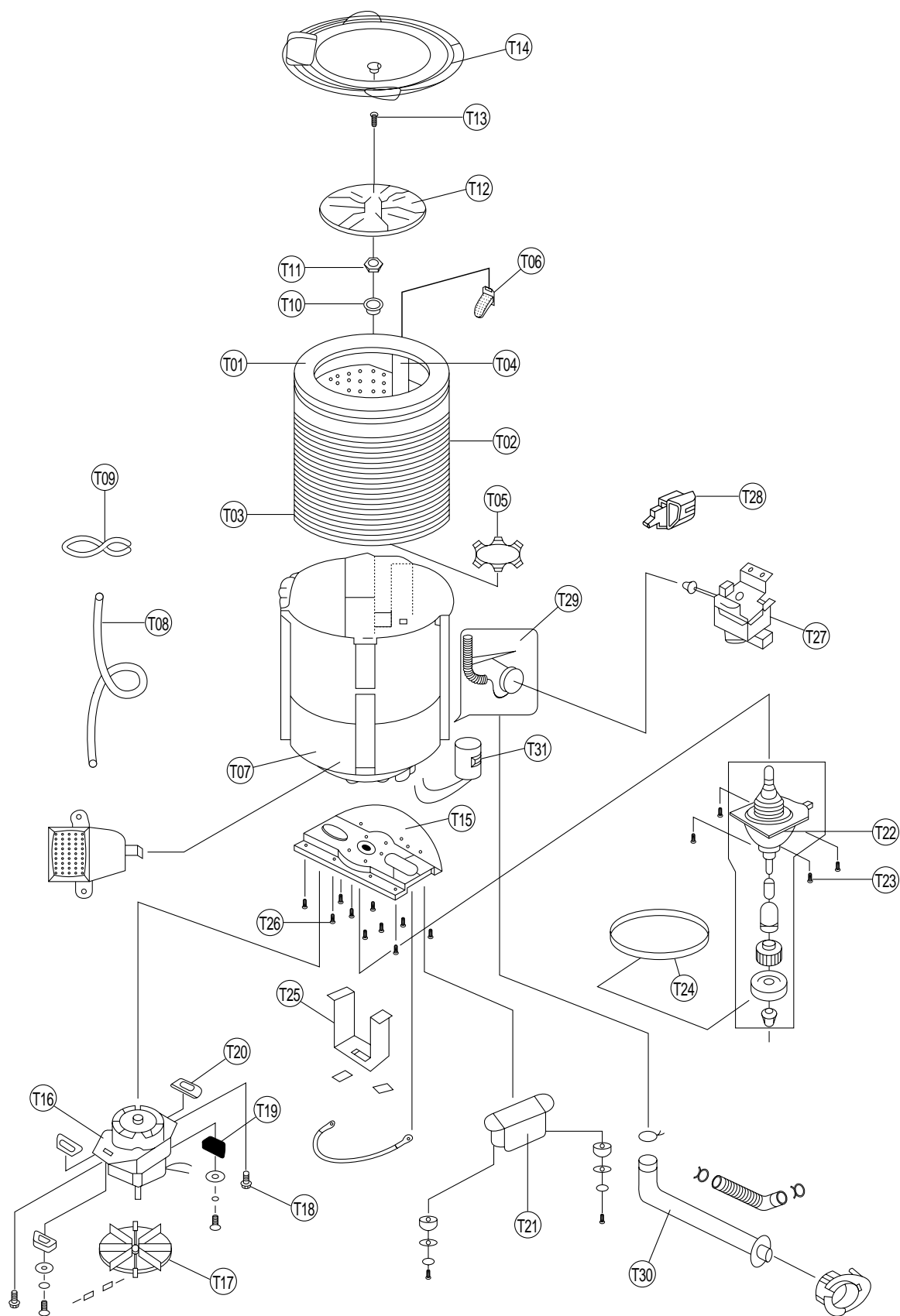
NOTE:

1. The brake adjustment has been made at the factory, so that it is not to re-adjust. However, in case of insufficient brake operation, perform the upper procedure.
2. Overtightening of the adjustment bolt will cause poor brake performance.
3. Undertightening of the adjustment bolt will cause continuous bracking and, thereby, cause the problems of the motor during the spin cycle.

10. EXPLODED VIEW AND PARTS LIST

EXPLODED VIEW





PARTS LIST

REF NO.	PART LIST	PART NAME	DESCRIPTION	Q'TY	REMARK
ASS'Y PLAET					
P01	3614500300	PLATE T	HIPS	1	
P02	2TA13050SV	TAPE ALUMINUM	0.13t x 50mm SILVER	18cm	
P03	5EP4054800	TRANS POWER	AC115V/50Hz DC0.65A	1	T3-V1
	5EP4054801		AC230V/50Hz DC0.65A		T3-2
P04	3615402500	VLAVE-W, INLET (HOT)	AC110-130V/60Hz	1	Option COLD ONLY: 0EA
	3615400901		AC220V/60Hz		
	3615401400		AC220-240V/50		
P05	3615402600	VLAVE-W. INLET (COLD)	AC110-130V/60Hz	1	
	3615400801		AC220V/60Hz		
	3615401300		AC220-240V/50		
P06	3613204500	HOSE SPRAY A	NBR L=74.5	1	
P07	3613204600	HOSE SPRAY B	NBR L=141	1	Option
P08	3610400400	BODY DETERGENT	FRPP	1	
	3610400420		FRPP, COLD ONLY		
P09	3611103100	CASE DETERGENT	ABS	1	
P10	3612301100	GASKET VALVE	PVC-S	2	COLD ONLY: 1EA
P11	3618902101	UNIT BUBBLE AS	AC110-130V/60Hz	1	
	3610028701		AC220V/60Hz		
	3610014351		AC220-240V/50Hz		
P12	3614800100	SENSOR PRESSURE	DC5V PS-D6 DOMESTIC	1	
P13	3619003300	SWITCH SAFETY AS	DC15V 10mA	1	
P14	3614200300	PANEL REAR	ABS	1	
	3614200310		ABS, COLD ONLY		
P15	3619002300	SWITCH POWER AS	AC110V/50, 60Hz	1	
	3619001600		AC220V/50, 60Hz		
	3619002000		AC240V/50, 60Hz		
P16	3615103300	SPRING LEFT	SUS 304 D=2.0	1	
P17	3615103400	SPRING RIGHT	SUS 304 D=2.0	1	
P18	3610010300	ASSY DOOR	DOOR+WINDOW+HANDLE	1	
P19	3612709340	HARNESS AS	DWF-7590RD	1	
	3612724300		DWF-7560CTE (COLD ONLY)		
P20	PRPFSWKC00	FRONT PANEL AS	DWF-7560TE	1	
	PRPFSWWU00		DWF-7560CTE		
	3610088400		DWF-7590RDTE		
P21	3610901000	CAP	CR	2	
P22	4500G09040	LOCK COVER	PP	1	

REF NO.	PART LIST	PART NAME	DESCRIPTION	Q'TY	REMARK
ASS'Y PLAET					
T01	3610009900	BALANCER AS	PP	1	DWF-7560/90
	3616101600		PP		DWF-8060/90
T02	3618800301	TUB I	PP	1	DWF-7560/90
	3618801700		YUS430D		DWF-8060/90
T03	3618802000	TUB U	PP	1	DWF-8060/90
T04	3612500100	GUIDE FILTER AS	PP	1	DWF-7560/90
	3612502200		PP		DWF-8060/90
T05	3617200200	FLANGE TUB	ADC-12	1	
T06	3610085500	ASS'Y FILTER	PP (NOLON 74x130)	1	
T07	3618800900	TUB O	PP (J-370), PUMP	1	Non VE No Thermistor
	3618800100		PP (J-370), NON-PUMP		
T08	4500D08170	HOSE (to BUBBLE)	ID=8.0, OD=12, EXPORT	31cm	
T09	4500D08180	CLAMP	SWC	1	
T10	4509L83070	SPECIAL WASHER	SUS 304 T2.0 P144	1	
T11	4509G83081	NUT-SPIN SHAFT	ZDC2 Cu, Ni	1	
T12	3610017600	ASS'Y PULSATOR	PP (JI-330)	1	
T13	4505E3203A	SC. PULSATOR FIX AS	6x26 SCREW+RING O	1	
T14	3611402000	COVER TUB	PP (JI-360)	1	
T15	4509M34010	BASE	SECEN 2.0tx410x385	1	
T16	3964310510	MOTOR CONDENSER	220V/50Hz (PN, NE)	1	
	3964220400		110V/60Hz (PT, TE)		BRACKET BALL BEARING
	3964130700		110V/50, 60Hz (JE)		
	3964610310		240V/50Hz (PM, ME)		
	3960019700		220V/60Hz (PL, LE)		
	3964820510		120, 127V/60Hz (PA, PS, SE)		
T17	3618401310	PULLEY MOTOR AS	M-TYPE DS=10 DP=53	1	50Hz
	3618401100		M-TYPE DS=10 DP=48.5		60Hz
T18	7650804211	BOLT HEX (to MOTOR)	6B-1, 8x42, S.P/W, MFZN	4	
T19	3611502000	CUSHION UPPER	POM	2	
T20	3611502800	CUSHION DOWN	POM	2	
P21	3611600600	BALANCER WEIGHT	FC-20, 3550gr	1	
P22	3617300201	GEAR MECHANISM	GM-6685, NTN	1	
P23	7640801611	BOLT HEX (to GEAR)	6B-1, 8x16, SW, MFZN	4	
P24	4507D34020	BELT V	M20	1	
P25	3618300100	PLATE GEAR PROTECT	SBHG 1.6T	1	
T26	7341601611	SPECIAL BOLT (to PROTECT)	6B-1, 6x16, MFZN	2	

REF NO.	PART LIST	PART NAME	DESCRIPTION	Q'TY	REMARK
T27	3966320210	MOTOR SYNCHRONOUS	220V/60Hz, ST=18mm (LE)	1	NON-PUMP
	3966130120		100V/50, 60Hz, ST=18mm (JE)		
	450ED45020		110-130V/60Hz, ST=18mm (TE, SE)		
	3966010120		220-240V/50Hz, ST=18mm (NE, ME)		
	3966320230		220V/60Hz, ST=23mm (PL)		PUMP
	3966130140		110V/50, 60Hz, ST=23mm (PJ)		
	450ED45040		110-130V/60Hz, ST=23mm (PT, PS)		
	3966010140		220-240V/50Hz, ST=23mm (PN< PM)		
T28	3617801000	LINK BRAKE	POM (F20)	1	PUMP
T29	3615403900	VALVE DRAIN AS	DWF-8590RDS	1	NON-PUMP
T30	3613209600	HOSE DRAIN I	LDPE+EVA (L=106)	1	PUMP
	3613206500	HOSE DRAIN I AS	PE-LD/EVA (L=424)		NON-PUMP
T31	3610076130	ASSY CONDENSER	54µF+60µH (JE, TE, PT)	1	L=470mm Connector type
	3618904120		45.6µF+60µH (PA)		
	3610076230		41.6µF+60µH (SE, PS)		
	3610032630		13.5µF+60µH (NE, PN, LE, PL)		
	3610045630		11.4µF+60µH (ME, PM)		
ASS'Y CABINET					
C01	3610800100	CABINET UPPER	PP (J-380A)	1	
C02	3610800200	CABINET LOWER	PP (J-380A)	1	
C03	3612600500	HANDLE	ABS	2	
C04	3610009100	ASSY LEG ADJUST	DWF-7590R	2	
C05	3610017400	ASSY LEG FIX	PP	2	
C06	3611402400	COVER LEG	ABS (LEFT)	1	90 SERIES
C07	3611402500	COVER LEG	ABS (RIGHT)	1	90 SERIES
C08	4509L03031	COVER DRAIN HOLE	PE-HD	1	
C09	WX745N7B1-	CORD POWER AS	X H05W-F 3x0.75 2.3m GY (ME)	1	BUYER SPEC.
	WAK42H761-		A VCTFK 2x0.75 2.3m GY (TE)		
	WF915N7B1-		9F H05WW-F 3x0.75 2.7m BK (CHILE)		
C10	3610701600	BUSHING CORD	DA-B1-6NR4 (TE)	1	For Plastic Cabinet
C11	4509D64000	HARNESS OUTER	VSF 50/0.18 GREEN	1	Option
C12	3610010700	ASSY SUSPENSION (A)	DWF-7590R	2	
C13	3610010800	ASSY SUSPENSION (B)	DWF-7590R	2	
C14	3618903310	UNIT FUSE FILTER	250V 8A (TE, PT)	1	
	3618903300		250V 4A (NE, PN, ME, PM, LE, PL)		
C15	3611401700	COVER B	DWF-7590R	1	
C16	3619604300	ASSY DRAIN PUMP	220-240V/50Hz (PN, PM)	1	
	3610080310		220V/60Hz (PT, PL)		
C17	3613207500	HOSE DRAIN B AS	DWF-6635P		

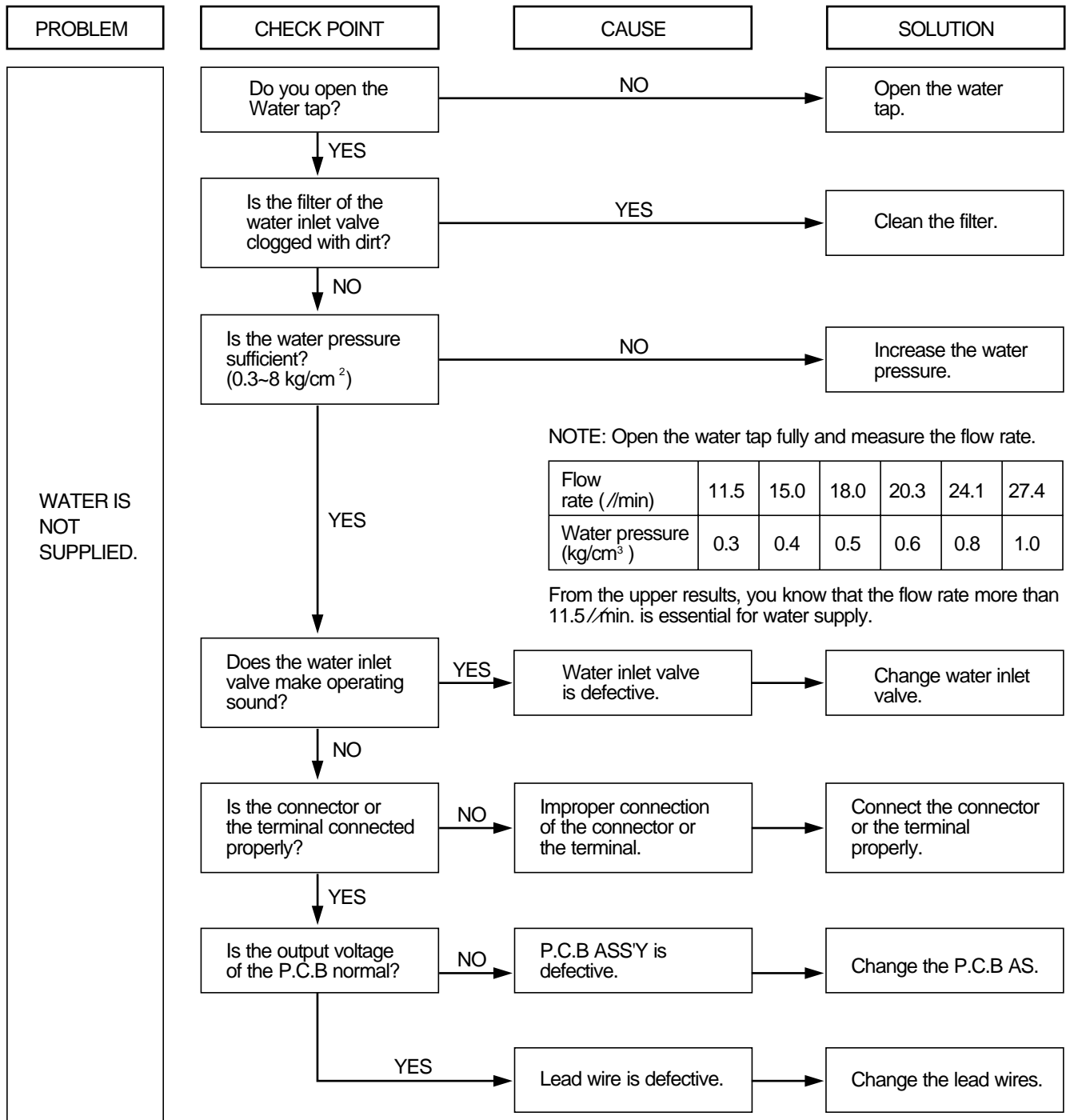
REF NO.	PART LIST	PART NAME	DESCRIPTION	Q'TY	REMARK
ASS'Y ACCESSORY					
A01	3613207601	HOSE INLET AS	L=1.3m HOOK	2	COLD ONLY: 1EA
A02	4509K56000	HOSE DRAIN	EVA (L=830mm)	1	NON-PUMP
	3613203101	HOSE AS	DWF-5230PN	1	PUMP
A03	3611402100	COVER UNDER	FRPP	1	
A04	3611401100	COVER U	ABS	1	90 SERIES

11. TROUBLESHOOTING GUIDE

NOTE:

1. When you replace the P.C.B. ASS'Y do not scratch the surface of the P.C.B. ASS'Y.
2. Disconnect the power cord from the electric outlet.

CONCERNING WATER SUPPLY

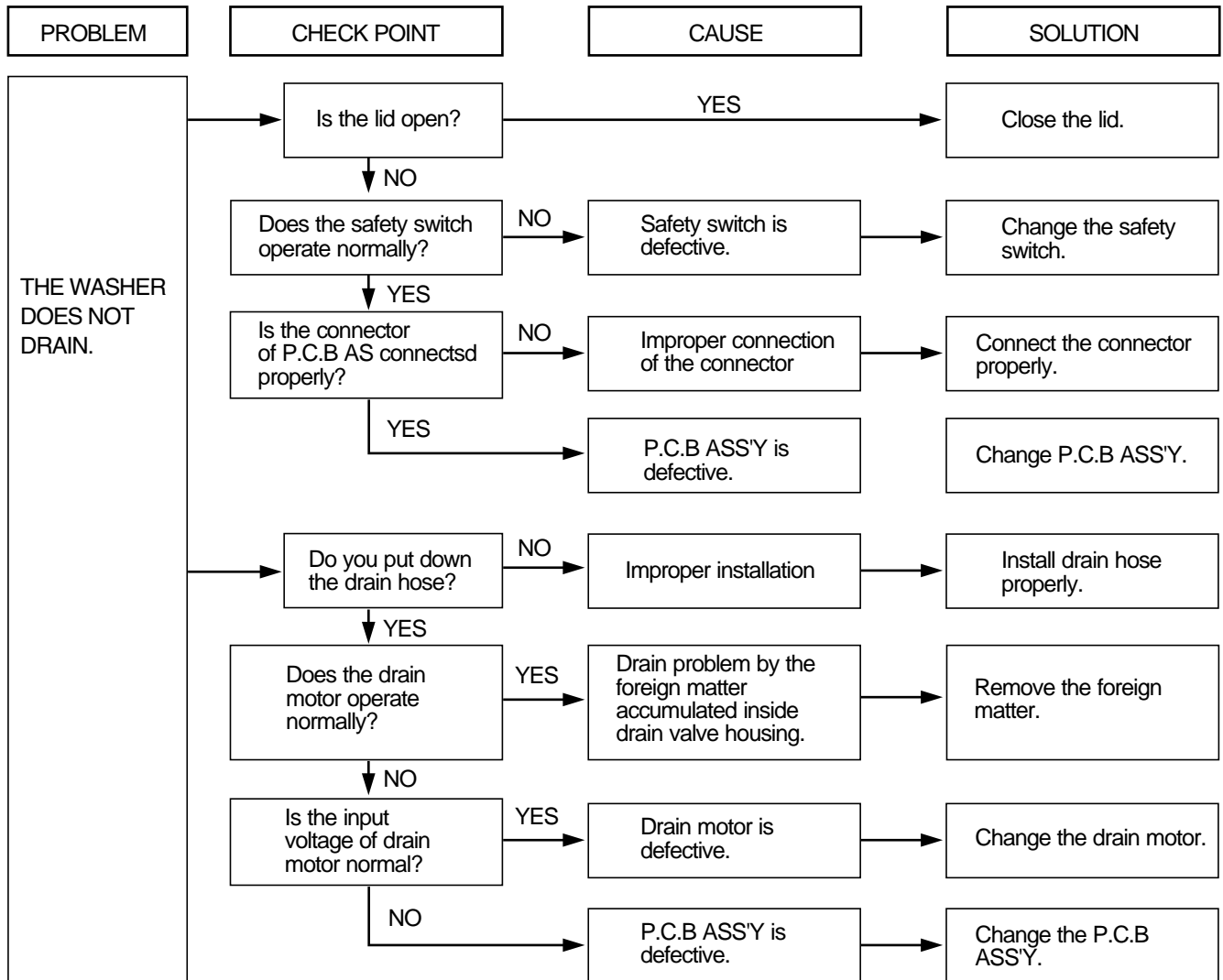


PROBLEM	CHECK POINT	CAUSE	SOLUTION
WATER SUPPLY IS NOT STOPPED.	Does the water supply continue while the power is turned off?	YES The water inlet valve is defective.	Change the water inlet valve.
	NO		
	Does the water supply start as soon as you press the power switch?	YES The triac of P.C.B is defective.	Change the P.C.B ASS'Y.
	NO		
	Operate the washer after setting the water level to "HIGH"		
	Does the water supply continue after the water reaches to the "HIGH" level?	NO	Normal operation
	YES		
	Is the air tube of water level switch kinked or deformed?	YES Air tube is defective.	Change the air tube.
	NO	Pressure switch is defective.	Change the Pressure switch.

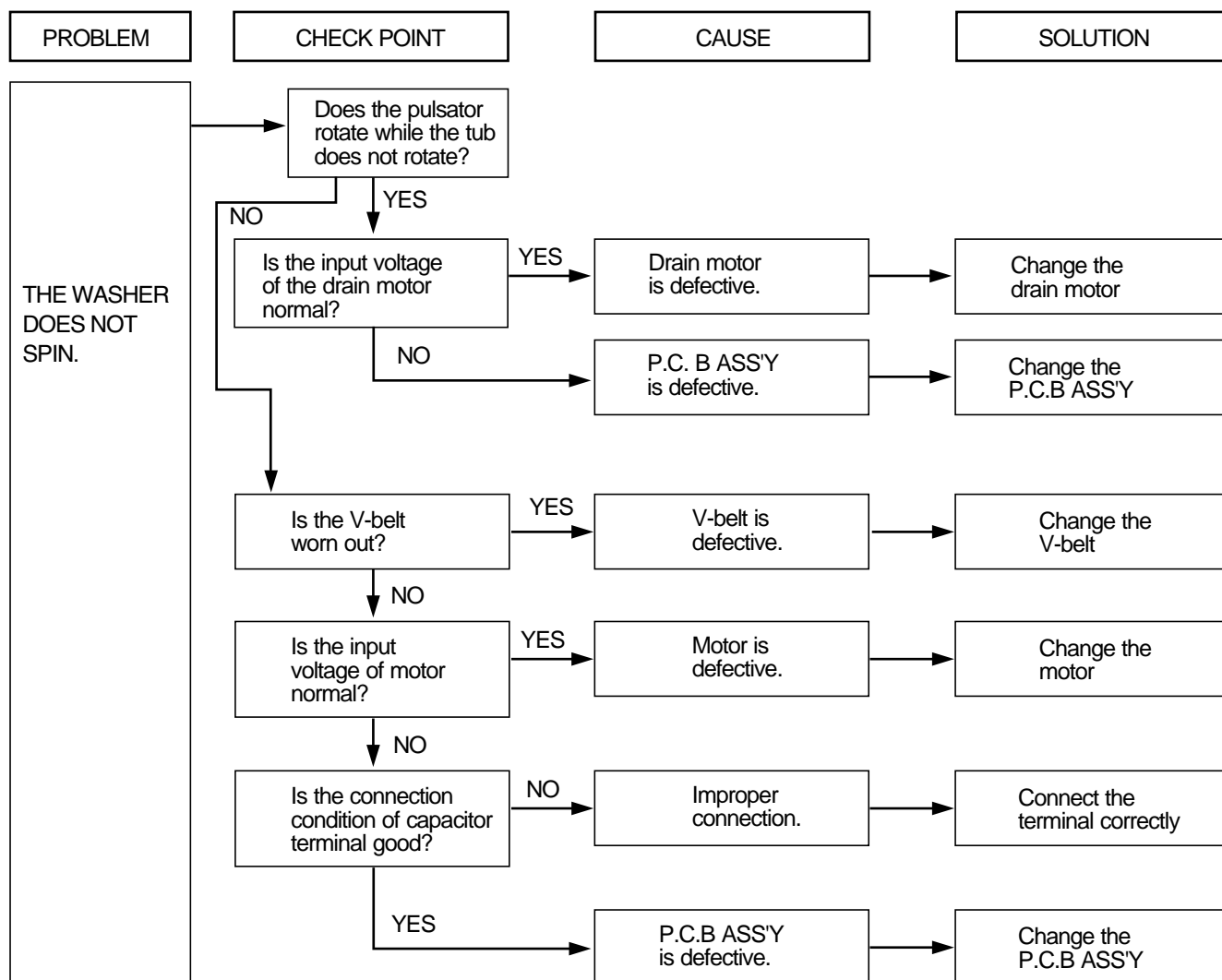
CONCERNING WASHING

PROBLEM	CHECK POINT	CAUSE	SOLUTION
THE PULSATOR DOES NOT ROTATE EVEN IF THE WATER IS SUPPLIED.	Does the motor operate after finishing water supply?		
	NO		
	YES		
	Does pulsator rotate in only one direction?	YES The triac of P.C.B is defective.	Change the P.C.B ASS'Y.
	NO		Normal
	Does the motor make operating sound?		
	YES		
	NO		
	Is the motor coil disconnected?	YES Motor is defective.	Change the motor.
	NO		
	Is the connection condition of capacitor terminal good?	NO Improper connection.	Connect the terminal properly.
	YES		
	Is the V-belt worn out?	YES V-belt is defective.	Change the V-belt.
	NO		Change the motor.

CONCERNING DRAINING











CONCERNING SPINNING



CONCERNING OPERATION

PROBLEM	CHECK POINT	CAUSE	SOLUTION
THE INDICATOR LAMP (LED) DOES NOT LIGHT UP WHEN THE POWER SW IS PRESSED.	Is the plug connected to electric outlet?	NO	Connect the plug.
	↓ YES		
	Is the power switch pressed?	NO	Press the power switch.
	↓ YES		
	Is the condition of power switch good?	NO → Power switch is defective.	Change power switch.
	↓ YES		
	Is the connector of the P.C.B. ASS'Y connected properly?	NO → Improper connection of the connector.	Connect the connector properly.
	↓ YES		
	Is output voltage of the transformer normal?	NO → Transformer is defective.	Change the transformer.
	↓ YES	P.C.B ASS'Y is defective.	Change P.C.B ASS'Y.
PROGRESS LAMPS (LED) DO NOT LIGHT UP.	Do you press START/HOLD button?	NO	Press START/HOLD button.
	↓ YES	P.C.B ASS'Y is defective.	Change P.C.B ASS'Y.
MOTOR ROTATES WHEN START/HOLD BUTTON IS NOT PRESSED.	Does the pressure switch operate normally?	NO → Pressure switch is defective.	Change the pressure switch.
	↓ YES		
	Check the output voltage of P.C.B ASS'Y.	Abnormal → P.C.B ASS'Y is defective.	Change P.C.B ASS'Y.
ABNORMAL NOISE DURING WASH PROCESS.	Is the strange noise generated when the pulsator rotates in TEST MODE of P.C.B ASS'Y.	YES → There is foreign matter between pulsator and tub.	Remove the foreign matter.
	↓ NO		
	Is the V-belt worn out?	YES → V-belt is defective.	Change the V-belt.

CONCERNING ERROR MESSAGE

MESSAGE	CAUSE	SOLUTION
	Improper installation of drain hose.	Install drain hose properly.
	Drain problem by being clogged with foreign matter.	Remove foreign matter in drain valve.
	Drain motor defective.	Replace drain motor.
	Water supply tap is closed.	Open water supply tap.
	Inlet valve is clogged.	Clean the Inlet valve.
	Flow volume of water less than 11.5l/min.	Flow volume not less than 11.5l/min. is necessary.
	Wash loads get uneven during spin.	Re-set wash loads evenly.
	Poor installation of the unit.	Install properly.
	The lid is opened.	Close the lid.
	Point of safety s/w. defective.	Replace safety switch.
	The P.C.B. ASS'Y is defective.	Replace the P.C.B. ASS'Y.
	Sensor switch or P.C.B. ASS'Y is defective.	Replace the sensor s/w. and operate the sensor course. In case 'E9' message is not disappear, replace the P.C.B. ASS'Y.
	This condition shows in case of reservation washing (S/H) button pressed and course is not set.	Turn the power switch on and off and then set the course.
	This condition shows that (S/H) button is pressed with the door being open after reservation washing time is set.	Close the door.

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